

TITLE 327 WATER POLLUTION CONTROL BOARD

LSA Document #09-615

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

IDEM requested public comment from August 11, 2010, through September 24, 2010, on draft rule language as well as comments on the potential fiscal impacts of the rule. IDEM received comments from the following parties by the comment period deadline:

Hoosier Environmental Council (HEC)
Conservation Law Center (CLC)
The Sierra Club (SC)
Citizens Action Coalition of Indiana (CAC)
Todd J. Applegate, Brad C. Joern, Kenneth Foster, Stephen Hawkins, Albert Heber, Ronald P. Lemanger, Tamilee Nennich, Nicole Olynk, Brian Richert, Michael M. Schutz, Alan Sutton - Purdue University (PU)
Livestock and Poultry Rule Revision Group (LPRRG)
Michael A. Veenhuizen (MV)
Kathy J. Martin (KJM)
Michael J. McCloskey, DVM, Fair Oaks Dairy Farms, LLC (MJMcC)
Scott D. Severson, Earth Wise, Inc. (SDS)
Dirk Eggleston, T&M Limited Partnership (T&M)
Tom and Melanie Caldwell, Greenmeadow Farms, Inc. (TMC)
Barbara Sha Cox (BSC)
Fred Davis (FD)
Malcomb S. DeKryger (MSD)
Environmentally Concerned Citizens of Randolph County (ECCRC)
Jim and Jean Hagler (JJH)
Allen and Judy Hutchison (AJH)
Erie Lockhart, Lockhart Farms (EL)
Melanie Love (ML)
Kathryn Petry (KP)

Guidance Documents

Comment: We anticipate that guidance will be needed for manure sampling and analysis, for determining nitrogen availability, for soil sampling, analysis and interpretation, as well as for inspection and recordkeeping. We are opposed to final adoption of this rule occurring before the development of needed guidance. (LPRRG)

Response: References to leading publications ranging from Purdue University publications to NRCS standards have been added to the rule for certain testing requirements and application rates, which should help clarify how CFOs should implement the requirements. However, IDEM will be working to update current guidance documents and will continue to evaluate the need to provide additional guidance as the rule progresses through the rulemaking process.

Fiscal Impact

Comment: To date only approximately 200 CAFO operations have made the transition to applying manure based on the phosphorus (P) needs of the expected crops, whereas nearly 425 CAFO and all CFO operations have remained on the nitrogen (N)-based system (estimates per IDEM staff in August-2010). Changes in manure application from a N to P basis will increase the acreage needed by 2 to 3 times, and thereby create a tremendous financial burden on producers who will either need to acquire additional land, bear the cost of manure transport and application to land not under control of the operation, or reduce the animal units on their operations to less than the permitted numbers (which may render them economically unviable). (PU) (LPRRG)

Response: IDEM estimates noted above reflect the number of farms required under the current state rules to have already adjusted to phosphorous-based land application practices, not the number of farms which have actually already done so. For operations not marketing their manure, or operations that have not adjusted to a phosphorous-base land application system, IDEM understands that such a switch is not without difficulty. However, CAFOs have been aware of this possible requirement as it was originally incorporated into the 2004 NPDES CAFO rule for all CAFOs to implement (P) spreading rates by December 31, 2006, and many CAFOs, as well as CFOs, have already proactively made this adjustment absent an explicit rule requirement. The rule contains a timeframe of seven (7) years for farms to convert to ease the transition. Phosphorus-based application is a requirement under the CWA for all large CAFOs holding a NPDES CAFO permit. IDEM believes the transition time allowed for CFOs to come into compliance with the phosphorus-based application rates will ease the financial burden and in the long run assure that land application fields remain viable and do not become over-saturated with phosphorus, the runoff of which is a serious concern for Indiana waterways.

Comment: While substantial and potentially detrimental financial impact is anticipated, an accurate estimate of the true fiscal impact may be difficult or impossible to obtain, because current soil tests for P are not available across the broad range of livestock operations and management systems within the state. (PU)

Response: Soil tests for phosphorus are readily available and cost approximately \$10 per sample. The most basic manure and soil tests offered by the most widely-used labs in the state will contain the Phosphorus information needed, no extra costs are associated with the P test requirement. It is likely that if a facility is meeting the current manure and soil testing requirements found in current 327 IAC 16, the facility is most likely already collecting the information required for the P test requirements under the draft rule. IDEM has determined that the fiscal impact of the updated requirements are not as substantial as initially thought prior to rule revisions that take into account differing requirements for large vs. smaller facilities. Again, the rule contains a timeframe of seven (7) years for farms to convert to ease the transition.

Comment: The new provisions also have potential to limit the ability of producers to adopt future technologies that might mitigate the fiscal impact of regulation. For example, limiting manure applications to annual P needs may unintentionally limit the potential for producers to adopt new technologies that tailor diets, manure handling, and manure application to the nutrient needs of a multi-year crop rotation. (PU)

Response: IDEM believes that sufficient flexibility has been built into the rule to allow for innovative technologies in the areas of manure management and nutrient application. 327 IAC 19-14-2, for example, provides that the commissioner may approve an alternative amount of acreage than would be required to meet the land application limits within the rule if the permittee can demonstrate that innovative technologies or alternative methods of manure management would ensure compliance with the storage and manure handling requirements within the rule. Additionally, the rule allows for a nitrogen-based land application if soil tests indicate that phosphorus content in the soil is very low.

Comment: Other costs associated with this proposed rule include the development of storm water retention/pollution prevention, treatment, and disposal. Comments made during the second notice only referred to the incurred cost for the development of the plan, rather than costs directly or indirectly associated with the implementation of the plan, construction, surface grading, runoff collection, storage, treatment, application and management. In many cases, creation of storm-water retention ponds, pumps for lagoons or other storage, irrigation systems, etc. will cause substantial economic impact to the operation. (PU) (LPRRG)

Response: The storm water requirements have been amended to reflect the distinction between federally-defined CAFOs and state-defined CFOs. The initial uniform approach mirrored Indiana's current CAFO language to extend coverage to all farms. The rule language has been updated to divide CFOs and CAFOs. CFOs will be subject to a simplified certification based on best management practices, while CAFOs will remain subject to the requirements of 40 CFR 122.23(e) as applicable. The requirements for CFOs are not as extensive as originally proposed, but still require operations to use and consider good management practices in managing storm water.

Comment: No reference is made as to the fiscal impact of the groundwater monitoring requirements at 327 IAC 19-10-1 nor to the construction quality assurance plans in 327 IAC 19-12-4. As proposed, ground water monitoring will have a huge financial impact upon facilities which are required to monitor. The requirement for construction quality assurance plans will also greatly increase cost, and we do not believe that this requirement will provide additional environmental protection. (LPRRG)

Response: Ground water monitoring has only been required when a waste management system is proposed in a setting deemed a sensitive area. Currently, less than one percent (1%) of all regulated CFOs and CAFOs are performing any type of ground water monitoring. The inclusion of the requirements is an effort to standardize permit conditions already currently implemented through policy. In most cases permittees have eliminated the necessity for groundwater monitoring by either relocating the waste management system outside of a sensitive area or by the use of design and construction specifications that ensure adequate environmental protection. The effort regarding quality assurance plans is much the same. Less than one percent (1%) of facilities have been required to submit assurance plans, and the inclusion of this requirement in rule is intended to standardize this requirement when, and if, required.

Comment: Regulations should give incentive for an operation to go above and beyond the minimum regulatory requirements. If the new regulation significantly differentiates between CFO requirements and NPDES CAFO requirements, the end result can reduce the fiscal impacts to the regulated community, and provide additional environmental protection at no additional cost to the taxpayer. (SDS)

Response: There are a number of distinctions between the state CFO and the NPDES CAFO regulations, many of which are driven by state statutory requirements for CFOs as defined under Indiana law. While the regulations do not have specific incentives to go "above and beyond", there is a great deal of flexibility built into the rule to allow owners and operators to use management practices that prove to be the most effective and efficient way to meet the regulatory requirements, be good environmental stewards, and run the farms in an efficient way.

Comment: IDEM must demonstrate how they propose to ensure equal and consistent treatment and implementation of rules at all facilities regardless of location or size. How will IDEM ensure that rule interpretation will be uniform across the state and not subject to differing interpretations from individual compliance inspectors? Otherwise, some facilities are put at a competitive disadvantage by

bearing additional costs that other farms do not. Many of the proposed operational practices will require additional oversight by IDEM to ensure equal treatment for all facilities. How has IDEM considered these additional costs to the Indiana Taxpayer? (SDS)

Response: As IDEM does not propose to hire additional staff as a result of these amended rules, the Indiana taxpayer is not incurring additional costs for this rulemaking. Any regulation is subject to interpretation however, the point of this rulemaking was to update, after many years of experience running the program, the requirements for state-defined CFOs. The rules as amended have been written to clarify as much as possible operating requirements for all CFOs in the state. Existing guidance will also be updated to coincide with the updated regulations. Such guidance material is available to the public as well as IDEM compliance staff. As inspectors are required to provide a written report of an inspection, this is a tool IDEM uses to assure consistent interpretation and implementation of regulations.

Comment: Current federal NPDES CAFO rules do not require farms which self certify that they do not propose to discharge to conduct phosphorus based land application. The fiscal impact will be greater than what IDEM suggests. IDEM should evaluate the fiscal impact of this rule against the requirements of the current CFO rule only and not against the requirements of the current NPDES CAFO rule. (SDS)(MJMcC)

Response: The fiscal impact analysis of the CFO rule is based on the amendments to the CFO rules and what compliance with this rule will cost all entities to whom it applies. Any reliance on information related to the federal NPDES CAFO regulation is only for purposes of comparing what costs would be caused by federal NPDES requirements versus the state CFO requirements. Many state CFO requirements apply to CAFO NPDES sources as well.

Comment: The NRCS 590 standard specifically allows phosphorus applications on a multi-year rotational basis. There is no such provision in the draft rule. IDEM is not considering that there are implementation differences between current CFO rules and the draft rule that will result in a more significant fiscal impact than IDEM is suggesting. IDEM should reevaluate the fiscal impact of the proposed rule. (SDS)(MJMcC)

Response: IDEM will continue to refine the fiscal impact estimate based on information received and continuing research into costs to implement the rule.

Comment: IF IDEM lacks the authority to require any kind of bonding for CFOs, then who pays for the cleanup of the site resulting from a spill or closure which leaves the site contaminated? (ML)

Response: To the extent that a viable responsible party is available, i.e. the owner of a CFO; when a clean-up is necessary, that person is responsible for cleanup costs. In situations that may require an immediate response or require the state to step in and remediate a site that is left contaminated, the normal cost recovery procedures the agency uses for such sites would be implemented. The state will pursue all responsible parties to seek their share in cleanup costs for such sites.

AFO Discharges, Accidental or Intentional

Comment: Under Ind. Code § 13-11-2-40(3) and the draft rule section 327 IAC 19-2-5, an AFO “that causes a violation of water pollution control laws” is defined as a CFO, and thus must obtain CFO program approval. Any unpermitted AFO that discharges pollutants from a point source to waters of the State would violate Clean Water Act § 1311(a) and 327 IAC 5-2-2. All that is required is a finding by IDEM that an unpermitted AFO discharged pollutants from a point source to waters of the State. Such a

finding may be supported by data gathered by IDEM or by third parties. See 40 CFR §§ 25.9 and 123.26. (HEC) (CLC) (SC) (CAC)

Response: IDEM agrees that any AFO that causes a violation of water pollution control laws is subject to becoming a CFO subject to regulation under the CFO program. Based on the individual circumstance of the violation, if IDEM determines that the CFO has discharged, IDEM may, after an on-site inspection of the operation, designate the AFO as a CAFO and require it to apply for a CAFO NPDES permit.

Comment: Any CFO or CAFO that discharges to waters of the state should be required to enter the CFO/CAFO program. (JJH)(BSC)(AJH)(ECCRC)

Response: Any entity defined as a CFO under IC 13-11-2-40 is required to enter the CFO program, regardless of whether a discharge has occurred. In the case of a CFO that has had a discharge, the state may determine that the CFO is then required to get a NPDES discharge permit and be designated as a CAFO under the CAFO NPDES regulations.

Comment: Self-certification is not appropriate. Who will check to see if the information provided by the owner is accurate? (KP)

Response: Self certification was a concept contained in the federal CAFO NPDES regulations. That particular provision has been struck down by the court and is no longer part of the regulation. It was never part of the state CFO regulations.

Rule 1. General Provisions

Comment: 327 IAC 19-1-2. We would suggest that IDEM change this to read “Any increase in animal capacity, animal number, or manure containment capacity if above 10% of the number of approved animals”, and if the manure storage capacity and manure management plan were sufficient to handle this amount of additional animals for the specified length of time, the re-permitting process likely is not needed. (PU)

Response: This provision is taken directly from IC 13-18-10-1; attempting to “clarify” statutory language would only serve to confuse those reading the rule. As the statute is controlling, exact use of the statutory language is appropriate in this case. Copying the statute has eliminated the reference to changes in animal numbers.

Comment: All CFOs, regardless of size, should have to comply with a single set of requirements, including the requirements currently applied under Indiana law to permitted CAFOs, the requirements of the 2008 revised federal NPDES regulations, and any additional protective measures determined by IDEM based on the risk of discharge. (ECCRC)

Response: IDEM believes consistency in regulation is important. However, agricultural operations are difficult to regulate under a “one-size-fits-all” scheme given the variety of operations. The state CFO requirements derive from state statutes that require regulation of CFOs of a certain size and also contain construction requirements not found in the federal NPDES CAFO regulations. These requirements do apply to all CFOs and CAFOs within the state. IDEM does not agree that the federal CAFO NPDES requirements should apply to all state CFOs as well.

Comment: There should be substantial fines for owners submitting false reports, and where there is pollution the fines should be substantial and actually paid. (KP)(FD)

Response: IDEM agrees.

Rule 2. Definitions

Comment: The term “waste” appears most notably in the proposed definition of “manure,” but it also appears repeatedly throughout the other definitions in this section. “Waste” should not be included in the definition of manure and the terms “manure,” or “excreta,” or other appropriate terminology should be substituted for “waste” throughout these definitions. (LPRRG)

Response: These terms have been commonly used for a number of years in existing regulations as well as statutes. IDEM does not intend to remove the term waste from the rules. Materials not reused for land application or other nutrient production are, in fact, waste materials as byproducts of the raising of livestock.

Comment: 327 IAC 19-2-6 "Constructed wetlands". We suggest editing to add “treated” lagoon effluent to this definition. (PU)

Response: This is a no discharge rule, so allowing effluent from lagoons would not be appropriate.

Comment: 327 IAC 19-2-7 "Construction". For clarification for producers, this rule should also define what a “facility” is. (PU)

Response: This definition is from statute. The general assembly defined “facility” for many articles and chapters of Title 13, but chose not to define it for IC 13-18-10. Utilizing the dictionary definition of facility is adequate for its usage in the rule.

Comment: 327 IAC 19-2-8. “Contaminated run-off” needs to be clarified to fully explain the scope of the term. There have been concerns raised that contaminated run-off may include the mixture of dust and rainwater that comes from the roof of production facilities. Also, we are concerned that there may be efforts to expand this to include the mixture of rainwater and dust from exhaust fans. (LPRRG)

Response: This matches the current definition in the existing CFO rule. Clarification of this term is better left to EPA guidance relating to enforcement of the 2008 NPDES CAFO rule.

Comment: 327 IAC 19-2-10. “Discharge” should include a specific exclusion for agricultural stormwater. The NPDES program as defined in the Clean Water Act includes such a specific exclusion from the definition of a discharge. (LPRRG)

Response: There has never been an exemption for agricultural storm water in this definition. It is almost identical to EPA’s definition in 40 CFR 122.2. Further, the agricultural storm water exemption found in the federal NPDES CAFO program only applies when the person discharging can show that the land application activities were done in conformity with best management practices and the nutrients were applied at a rate to ensure appropriate agronomic uptake of the nutrient into the soil or crop to which it was applied.

Comment: 327 IAC 19-2-18. IDEM should recognize that determining whether land meets the definition of “highly erodible land” may be more complicated than a single definition. Should questions arise, IDEM should reference the NRCS Indiana Field Office Technical Guide Section II – Highly Erodible Land. (LPRRG)

Response: IDEM had changed the definition to match the NRCS definition.

Comment: 327 IAC 19-2-20 "Incorporation". It is proposed to include the definition of injection separate from incorporation. “Injection” means the placement of liquid manure beneath the surface of the soil in the crop root zone using equipment specifically designed for this purpose. (MV) (LPRRG)

Response: IDEM agrees with this comment and has added a definition for injection.

Comment: 327 IAC 19-2-22 "Manure". It is proposed that the definition of "manure" not be changed and if necessary a new, separate definition of "composted mortality" be developed specific to the characteristics of this material. (MV) (LPRRG)

Response: IDEM has revised the definition of manure in the new draft language.

Comment: 327 IAC 19-2-22 "Manure". We are opposed to changing the term "excreta" to "waste." For environmental regulations, "waste" is a term of art which connotes a by-product from a process with little to no value. Manure is not a waste product in that it has a beneficial use as a nutrient source for crop and forage production. We suggest that the definition should revert to the definition currently found in 327 IAC 16-2-22 (LPRRG)

Response: IDEM has revised the definition of manure in the new draft language.

Comment: 327 IAC 19-2-23. We suggest that the definition of "manure application" in 327 IAC 19-2-23 include reference to injection as a separate form of manure application. (LPRRG)

Response: IDEM has revised this definition to match the current definition in 327 IAC 16.

Comment: 327 IAC 19-2-24. "Manure Storage Facility" - This term ostensibly replaces both "Manure Storage Structure" (327 IAC 16-2-24) and "New Manure Storage Structure" (327 IAC 16-2-27), which was also eliminated in the draft rule. If it is IDEM's intent to have all manure storage facility requirements in the draft rule apply both to new and existing manure storage facilities, we must examine the possible ramifications of these requirements on existing manure storage facilities. Similarly, the current CFO rule also contains several specific references to "liquid manure storage," which appears nowhere in the draft rule. If all requirements that apply to liquid manure storage only in the current rule now apply to all manure storage structures, the ramifications of this are also concerning. (LPRRG)

Response: The term replaces "manure storage structure". The applicability of the term should be clear based on how it is used in the draft rule.

Comment: 327 IAC 19-2-24. "Manure Storage Facility" - We are also concerned with the inclusion of the phrase "manure containment area" in the definition of "manure storage facility." Manure containment area is not defined, but the remaining terms would seem to include any possible structure which could be used to store manure. We suggest that "manure containment area" be removed or that "manure containment area" be defined so that comment can be made. (LPRRG)

Response: This definition matches the current definition of "waste storage structure" from 327 IAC 16. IDEM has had no problems with the interpretation of "manure containment area".

Comment: 327 IAC 19-2-25 "Manure transfer system". We suggest addition of "channels or anything that will convey manure". (PU)

Response: IDEM agrees with this comment and the definition has been revised.

Comment: 327 IAC 19-2-27 "owner/operator". Clarification is needed as to whether this also would include a third party applicator and/or contractor and what activities from 327 IAC 19-1-1(a) would constitute a co-permit. We submit that the person or entity responsible for the "activity" and "management" be the legally responsible entity for the purposes of the permit. (PU) (LPRRG)(SDS)

Response: This definition is from the current 327 IAC 16 and IDEM sees no reason to change it. This rule is not intended to direct or infringe upon the private contract rights and duties of third parties performing services for owners and operators.

Comment: 327 IAC 19-2-28 "Potentially available nitrogen". It is proposed that this definition be revised to state "means the amount of nitrogen that is realistically available to be utilized by a crop during one (1) growing season." (MV) (LPRRG)

Response: This term no longer appears in the draft rule, so IDEM has deleted the definition.

Comment: Despite the definition of "Potentially available nitrogen", the term is not used in subsequent text. Use of the phrase "realistically taken up by a crop" could be taken as "all" or "loss due to timing of manure application". If needed, this definition should be revised to include losses due to application method and timing. IDEM's position of not allowing inclusion of N losses for manure based on time and application method is not based on science in any conceivable way; and Indiana is the only one of the 36 US states we have worked with that has such a policy. (PU)(T&M)(MJMcC)(SDS)

Response: This term was used in the draft rule in 327 IAC 19-14-3(b). However, IDEM has revised nutrient application language so the term no longer appears.

Comment: 327 IAC 19-2-29 "Process wastewater". We suggest that "manufacturing and processing" be further defined and specific examples be given within the guidance document to make this clearer for a producer. (PU)

Response: This definition has been revised to match the definition currently in 327 IAC 5-4-3.

Comment: 327 IAC 19-2-30 "Production area". This definition includes "composting piles" as part of the "manure storage area." It is not clear if this is composted manure or if IDEM is suggesting that this is "composted mortality" included in the definition of "manure." If this is meant to refer to "composted mortality," we do not believe that it should be included as part of the manure storage area. It is an entirely separate part of the operation. However, it is appropriate to consider "composted manure piles" as part of the manure storage area. (LPRRG)

Response: This definition is verbatim from EPA's definition at 40 CFR 412.2. Composting piles are considered to be composted manure piles. The term "composted mortality" has been removed from the draft definition of manure.

Comment: 327 IAC 19-2-34 "Sensitive area". We suggest that "critical habitat" be rephrased to "habitat where an endangered species lives that would be impacted by a water quality threat." We also do not believe that just because something is a "natural area" that it automatically poses a specific water quality threat. (LPRRG)

Response: The phrase "where conditions exist" ensures that only areas that pose a specific water quality threat would be included in this definition.

Comment: 327 IAC 19-2-35 "Site preparation". The changes to this definition are necessary and appropriate. IDEM is complimented for developing a definition that includes a realistic description of many of the components associated with site preparation. (MV)

Response: IDEM agrees with this comment.

Comment: 327 IAC 19-2-36 "Spill". It is unclear why the current definition of spill must be modified to explicitly include the term "manure." We are not aware of any situations where someone has claimed an incident was not a "spill" because the product was manure. If the procedure is now to list out specific products, then all possible contaminants should be listed. (LPRRG)

Response: The definition of "spill" has been changed to reference the definition in the existing spill rule at 327 IAC 2-6.1-4(15). Originally IDEM included the term "manure" specifically to highlight the fact

that it would be considered one of the substances for which spill reporting requirements would apply. Its inclusion was meant to clarify, not confuse.

Comment: 327 IAC 19-2-40 and 327 IAC 19-2-45 "Surface water" and "Waters". "Waters," which would appear to be the broadest category, specifically excludes private ponds, as well as off-stream ponds, reservoirs, or facilities built for reduction or control of pollution or cooling water prior to discharge. "Surface waters," which would appear to be a subset of "waters," includes "water present on the surface of the earth, and specifically is defined to include ponds. It would appear that the definition of "surface water" should be limited by the definition of "waters." (LPRRG)

Response: The term "waters" has a specific statutory definition found at IC 13-11-2-265. The term "surface water" is not derived from state statute but is used within the context of the CFO rule as an explanatory term to define setbacks, for example. Waters that are exempt under the state definition of "waters" may be otherwise regulated by IDEM in other programs. For example, the exempt isolated wetland is regulated and ponds used for pollution control are regulated under various IDEM permit programs. Therefore, where necessary to maintain water quality standards and protect Indiana's waters, IDEM can place restrictions on the proximity of certain activities to all sorts of waters, especially if there is or may be a hydraulic connection to other waters of the state.

Comment: 327 IAC 19-2-43 "Waste liquid". The term "clean-up water" needs further definition as there can be questions whether this is applicable to water used for sanitation and whether water from misters or ventilation cooling or milk cooling would be included. (PU)

Response: Yes, this definition includes water used for sanitation. If additional clarity is needed, IDEM will explore the possibility of updating the CFO guidance documents on this point.

Comment: 327 IAC 19-2-44 "Waste management system". Requirements intended to be placed on manure storage and handling systems in several sections of this draft rule should not apply to mortality composting and process wastewater. (LPRRG)

Response: IDEM agrees with this comment and has revised the definition.

Comment: 327 IAC 19-2-45 "Waters". The current definition at 327 IAC 16-2-45 and the definition in this draft rule vary in part (b) from the statutory definition at IC 13- 11-2-265. We cannot support the changes in the definition from the statutory definition. (LPRRG)

Response: IDEM agrees with this comment and has revised the definition.

Rule 3. Performance Standards

Comment: 327 IAC 19-3-1. We are seeking clarification as to what will constitute a "discharge to waters of the state." Instances where manure may leave the designated application area through no fault of the individual who applied the manure should not be considered discharges. (LPRRG)

Response: A discharge to a water of the state is, on its face, a fairly straightforward concept. As to whether the discharge is someone's fault or is caused by something else out of the control of the operator is something that has to be determined in every situation wherein a discharge has occurred. Attempting to clarify through rule language would necessitate an exhaustive list of potential situations that would inevitably fall short of being complete and would not, therefore, serve to clarify what is considered a discharge.

Comment: 327 IAC 19-3-1(c). We suggest that “immediately” should be removed from (c). The term “immediately” implies that an incident is occurring and that immediate action needs to be taken to remedy the situation. (LPRRG)

Response: IDEM agrees and has deleted “immediately”.

Comment: 327 IAC 19-3-1(d). We are concerned with the ability of livestock and poultry operations to “ensure compliance with the water quality standards in 327 IAC 2.” While we certainly agree that livestock and poultry producers are responsible for ensuring against unpermitted discharges into the waters of the state, most of 327 IAC 2 is outside the scope of what these producers can control. (LPRRG)

Response: 327 IAC 2 applies to all waters of the state with the exception of the Great Lakes basin areas subject to somewhat more stringent standards. Taking it out of this rule would not change that.

Comment: 327 IAC 19-3-1(e). IDEM should take this opportunity in rule-making to establish a registration process for out-of-state transport of manure and other CAFO waste products before those pollutants are stored or staged on land prior to disposal by land application. Registration could be a simple form that identifies where the manure came from, the volume to be stored/staged, the person(s) responsible for the waste when it enters Indiana with contact info, and the location of final disposal. (KJM)

Response: The regulation of out-of-state manure is an issue best addressed by the Indiana legislature. Currently the authority to regulate manure from out-of-state operations lies with the Office of the State Chemist (OSC). OSC is currently developing regulations for fertilizer use, including animal nutrients, for all land application within the state. The draft rule would require out-of-state distributors to be certified in Indiana and stage and land apply in accordance with OSC rules.

Comment: 327 IAC 19-3-1(e)(2). With respect to the performance standards for manure staging, there is concern with the requirement that manure be staged or applied in a manner to prevent run-off or ponding for more than 24 hours. This provision should be amended to state that run-off and ponding should be minimized. (LPRRG)

Response: This language is from the current 327 IAC 16 and IDEM sees no reason to change it. It is inaccurate to say that ponding and run-off should be minimized, they should be prevented. The time-frame provides a gauge whereby the person can assess whether he is meeting this standard.

Comment: 327 IAC 19-3-1(e)(3). This provision is vague and should be stricken. Otherwise, guidance should be provided as part of this rulemaking so that criteria for minimizing leaching beyond the root zone can be discussed. (LPRRG)

Response: This language is from the current 327 IAC 16 and IDEM sees no reason to change it. The performance standards are general standards that set forth the general requirements for management of a CFO. More specific requirements are included within the rule but the performance standards are intended to be the framework within which the CFO operates.

Rule 4. General Approval Conditions

Comment: 327 IAC 19-4-1(c). Language similar to that found in 19-5-1(c) should be included as a provision in 327 IAC 19-4-1. (LPRRG)

Response: IDEM agrees with this comment and has added language to reflect that.

Comment: 327 IAC 19-4-1(c). If IDEM has required additional design standards in the past – those standards should be incorporated into the regulations with action triggers so that both industry and

public understand what options have/can be used to further protect human health and environment. (KJM)

Response: This provision is included to ensure CFOs with site-specific concerns maintain protection of human health and the environment. Decisions on additional requirements are very fact sensitive and therefore difficult to describe in a general statement of applicability. It would not be practical to try and include a list of all possible conditions that could trigger 327 IAC 19-4-1(c).

Comment: A CFO located in a sensitive area should be required to have an individual NPDES permit (ECCRC)

Response: IDEM does not agree that an individual NPDES CAFO permit should be required for any CFO located in a sensitive area. IDEM believes that the design and operational requirements for all CFOs, including enhanced requirements for sensitive areas are sufficiently protective of Indiana's environment, including those areas labeled "sensitive" under the CFO regulations.

Rule 5. Alternate Design or Compliance Approach; Innovative Technology

Comment: 327 IAC 19-5-1. For Alternate technologies, clarification is needed (and examples and targets given within the guidance document) if the target for the technology was to create "clean" effluent/water for discharge and how this would fit into the existing rule. What is the performance standard for discharge? (PU)

Response: This is a no discharge rule; therefore there is no performance standard for discharge. IDEM agrees that guidance would be the best place to discuss alternative technologies and provide examples. However, putting specific parameters on alternate technologies within the rule somewhat defeats the purpose of allowing for approval of something alternative to the standards contained within the rule. If a permit holder can demonstrate alternative design or management technologies that are as protective of human health and the environment as those within the rules, IDEM does not want to inhibit the use of such technologies but rather encourage them.

Rule 6. Existing Confined Feeding Operations

Comment: 327 IAC 19-6-1. We believe that 327 IAC 19-6-1 should be revised to clarify that it applies to existing confined feeding operations with a CFO approval. (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-6-1(a). A better and more inclusive list should be used, such as "compliance with all applicable state, local, and federal laws". (KJM)

Response: There are no federal laws regulating animal feeding operations below the CAFO thresholds and a CFO that becomes designated as a CAFO must then follow the CAFO NPDES regulations. The current list is comprehensive.

Comment: 327 IAC 19-6-1(b). It is not appropriate to require operations to make changes to any plans or operation until it is clear what the final version of the rule will be. We request that compliance be required six months after the effective date. (LPRRG)

Response: IDEM controls the effective date of the article. At a minimum there would be three months between final adoption by the board and the effective date. If deemed necessary, IDEM can extend that timeframe.

Comment: 327 IAC 19-6-1(c). This group is under the impression that the approval only indicates that there is a minimum of 180 days of storage. If no other indication of storage capacity exists in the approval, this provision should be clarified to indicate that an approval amendment is required when an increase in manure generated would reduce the storage capacity to less than 180 days storage. (LPRRG)

Response: IDEM agrees with this comment and has changed the language from “approved” to “required”.

Comment: 327 IAC 19-6-1(d). We suggest modifications to this section to not require producers apply for a new permit, such that they could increase animal numbers up to a specified percentage above which is currently permitted (we would suggest 10%) if the manure storage capacity is sufficient. (PU)

Response: IDEM has removed “animal number” from this provision. It now matches the language in IC 13-18-10-1.

Comment: 327 IAC 19-6-1(d). IC 13-18-10-1 only lists “animal capacity and manure containment capacity” as triggers for seeking approval from the department. It thus appears that requiring an approval just for an increase in “animal numbers” is outside of the scope of the authority granted by the General Assembly. Additionally, (d) states that a new application is required according to “IC 13-18-10-1 and the requirements therein.” IC 13-18-10-1 does not contain any requirements for an application other than to state that an approval from the department is required in certain circumstances. (LPRRG)

Response: IDEM agrees with this comment and has revised the language to match the statute.

Comment: 327 IAC 19-6-1(e). We question how it can be stated that an existing approval remains in effect when new requirements are being placed upon that operation. (LPRRG)

Response: 327 IAC 19-6-1 has been reconfigured to list the specific requirements that will apply to existing CFOs in relation to their existing approvals upon the effective date of the rule. Certain operational requirements have a compliance date of 90 days after the effective date of the rule.

Comment: 327 IAC 19-6-1(f). We understand this to mean that extremely small operations (including those under the CFO animal numbers) may be required to expand their manure storage capacity. We anticipate that this provision will do nothing more than to force those operations to shut down. We suggest that 327 IAC 19-6-1(f) be amended to state that the commissioner shall provide written documentation of why the waste management system must be modified. (LPRRG)

Response: IDEM does not have the authority to regulate any farm that does not meet the definition in IC 13-11-2-40. The only way an AFO under CFO numbers would fall under this rule would be if they were causing a water quality violation, in which case IDEM would take all necessary steps to ensure protection of human health and the environment. IDEM has added language requiring written documentation from the commissioner explaining the basis for any modifications.

Rule 7. Application Requirements

Comment: The draft CFO rule does not require notice to the public of application submittal. Provision of a public comment period is meaningless without such notification. (HEC) (CLC) (SC) (CAC)

Response: The notice requirements in the rule were established by the legislature and require notice to a county executive and any one that owns property within ½ mile of the proposed structures. In addition, applications received by the department are posted on IDEM’s website. Listservs are available to allow people to get notice of such postings from IDEM

Comment: 327 IAC 19-7-1. We believe it is unnecessary to require a new CFO application for those farms that already hold NPDES permits. Those operations went through an application which included approval for construction under the CFO program and the more rigorous requirements of the NPDES program for operation. (LPRRG) (MV)

Response: IDEM agrees with this comment and has deleted this provision as well as added language in LSA #09-213 (the NPDES CAFO rules) to allow for an administrative process for those CAFOs with NPDES permits to transition to a CFO approval.

Comment: 327 IAC 19-7-1. The language in 327 IAC 19-7-1 should be clarified that the application process applies to those operations not previously regulated under the CFO program or which are expanding animal capacity or manure containment capacity. The other option is to place language in 327 IAC 19-6-1(d) stating that the application must comply with 327 IAC 19-7-1. (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-1(c)(10). The General Assembly amended IC 13-18-10-2 to require that notice be provided to owners and occupants within one-half mile of certain structures. We suggest that the phrase “adjacent landowners” be removed from 327 IAC 19-7-1(c)(10) and the language should remain just “potentially affected parties” or the appropriate language with respect to those within one-half mile should be added. (LPRRG) (MV)

Response: IDEM has removed “adjacent landowners” from this provision and has added IC 13-15-8.

Comment: 327 IAC 19-7-1 (c)(11). IDEM should have a higher fee associated with CAFO permit applications in order to generate additional monies for compliance and enforcement of those permits. Several States use a sliding scale that causes an increase in fee based on animal numbers – this puts a higher fee on the largest facilities which generate the most pollution. (KJM)

Response: This rule concerns CFOs, not NPDES CAFO permits. Additionally, fees can only be established, or revised, by the legislature.

Comment: 327 IAC 19-7-1(c)(13): This provision is confusing and unnecessary. It is proposed that it be deleted. (MV) (LPRRG)

Response: IDEM disagrees that the provision is confusing and unnecessary. IDEM has had a number of instances where parcels within a CFO facility are divided up among several owners in an apparent effort to avoid regulation under the CFO program. The land continues to be operated as a single operation in practice. If the land is owned by several different people but under the control of an owner /operator as that term is defined within this rule, and operated in practice as a CFO, it is a CFO for purposes of regulation and must meet the requirements of these rules.

Comment: 327 IAC 19-7-1(d). We believe that this language is unnecessary. If this provision is meant to apply to those who must report past material violations of environmental laws, this information is irrelevant to any consideration which IDEM would need to make with respect to previously alleged environmental violations. If it is meant to apply to all operations seeking an approval, the requisite information related to soil testing and fertility levels is already contained within the manure management plan. (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-1(d). There is no reason for specific field soil tests to be included in the application. That material is more appropriately kept on the farm where it can be reviewed by IDEM inspectors if needed. Also, phosphorus is the only nutrient which should be a concern in soil testing for

purposes of this rule. Producers who choose to use application methods other than surface application should be allowed to use the relevant setback in their calculations. (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-1(d). We suggest changing this to read "...be no more than 4 years old". Purdue University's fertilizer recommendations are built upon a 4 year soil testing interval. (PU) (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-1(d). Currently, the use of terms such as "soil test P" or "phosphorus levels" need further definition to distinguish which soil test method was implemented (e.g. total P, Mehlich 3, Bray P, or even an Olsen P) which have very different characteristics and implications. Presumably, the rule was meant to provide reference to a Mehlich 3 or Bray P soil test level taken from the 0 to 8 inch depth. This must be clearly stated. (PU)

Response: IDEM has revised this language.

Comment: 327 IAC 19-7-2(a)(1) and 327 IAC 19-7-3(g). IDEM needs to consider the legibility of soil maps and farmstead plan drawings submitted in the permit application with respect to ability to scan into the virtual file cabinet and whether or not the printed version from the VFC is legible. (KJM)

Response: IDEM will do everything possible to ensure that VFC documents are legible, but we are confined by current technologies.

Comment: 327 IAC 19-7-2(a)(2). This provision should require the applicant to map all wells, public and private within 1000 feet of the proposed manure storage facilities. (KJM)

Response: The map currently requires the map to show all public wells within 1000 feet, and private wells within 500 feet. IDEM feels this is sufficient to protect human health and the environment.

Comment: 327 IAC 19-7-2(b)(2). We suggest that the plot maps include the boundaries of the parcels that contain the actual livestock and poultry production areas as well as the manure storage structures. For (b)(6) only the names of the owners of the parcels where the actual animal production and manure storage facilities are located should be included. (LPRRG)

Response: IDEM has revised the language to include the boundaries of the parcels that contain the actual livestock and poultry production areas. IDEM deleted (b)(6) and included that provision in (b)(2).

Comment: 327 IAC 19-7-2(b)(4). Our recommendation for additional consistency would be to adopt the Indiana NRCS setback standards for land application of manure to ensure consistency for producers working with both agencies. (PU)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-2(b)(4). The requirement should be that setback calculations will be made based upon the type of application to be done. (LPRRG) (PU)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-2(b)(5). We are opposed to the requirement that the name of the owner of parcels where manure will be applied is included. This rule already requires that parcel maps with application field boundaries be included. This additional requirement of providing the landowner's name will not provide any additional information upon which important environmental considerations will be used. (LPRRG)

Response: IDEM agrees with this comment and has deleted this provision.

Comment: 327 IAC 19-7-2(b)(6). What constitutes a “parcel” of a CFO that hasn’t already been listed in 327 IAC 19-7-2? What other structure or land area is this term referring to? If another owner owns another manure storage facility not located on the proposed production area, that would be a satellite storage structure to which the CFO approval would not apply. (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-3(a). The inclusion of the existing structures is unnecessary as that information is already included as part of the facility detail page of the CFO application. (LPRRG)

Response: It is necessary that this information be included in both the facility detail page and the farmstead plan. Having one without the other would render both meaningless.

Comment: 327 IAC 19-7-3(a). Identifying structures within 500 feet of the waste management systems is confusing and needs to be rewritten because numerous individuals have interpreted the provision differently. We believe that it is stating that all buildings on the farmstead must be identified and that special features included in the listing from (1) to (9) that are within 500 feet of a waste management system must be included. (LPRRG)

Response: IDEM does not believe the language to be unclear and agrees with the interpretation. The features listed, if they are within 500 feet of a waste management system, must be included in the farmstead plan.

Comment: 327 IAC 19-7-5 . Manure management plan – The prior use of this term in CFO regulations is highly misleading and should be called a Sampling and Analysis Plan. If IDEM is trying to create a Nutrient Management Plan rule that meets the requirements of NPDES – then this older term should not be used in this new rule. (KJM)

Response: Manure management plan is a term used in statute; changing the term would lead to further confusion.

Comment: 327 IAC 19-7-5. The draft rule section omits several requirements included in the federal regulations on nutrient management plans (NMPs) under the NPDES program. See 40 CFR § 122.42. Federal requirements for NMPs should be included in the manure management plan requirements under the CFO rule. (HEC) (CLC) (SC) (CAC)

Response: This is not a NPDES rule. Requiring all CFOs to comply with all federal NMP requirements would be unnecessarily burdensome. IDEM can only require what is defined in IC 13-18-10-2.3 as a manure management plan.

Comment: The manure management plan should be an enforceable component of the CFO permit and all records pertaining to its implementation should be publicly available. At a minimum, the plan should include:

1. Location of the facility and proximity to drain tiles and waters of the state.
2. Number and type of animals.
3. A full definition of waste management techniques including where and how often manure is applied.
4. What crops are used to absorb nutrients.
5. Mass and concentration of nutrients and pathogens with maximum application amounts, types and locations.
6. Seasonal constraints such as no winter or frozen ground operations, and precipitation related restrictions. (ECCRC)

Response: The manure management plan requirements can be found at IC 13-18-10-2.3. As the plan is required to be submitted to the department, it is a public record and thus publicly available. Much of what the commentor wants in the manure management plan is contained in other records CFOs are required to keep, such as the operating record. IDEM is attempting to balance the need for the dissemination of public information and allow for public comment with the need of the CFO to be able to operate on a daily basis and do so in an efficient and environmentally protective manner.

Comment: 327 IAC 19-7-5(a)(4). IDEM's concern should be that land is available for manure application for each year of the approval, but not that particular acreage is under contract for a five-year period. We also object to the language which requires that acreage for application be calculated based upon setbacks for surface application regardless of whether surface application is being utilized. (LPRRG)

Response: IDEM agrees with the calculation of setbacks and has revised the language. IDEM has also moved this provision to the operating record without the "entire approval term" language.

Comment: 327 IAC 19-7-5(a)(4)(C). It is more appropriate that the land use agreement be between the livestock and poultry producer and the individual who has authority to contract for the application of manure. In those instances where the land is not being used by the individual who has the land use agreement, a separate operation should be able to enter into an agreement to apply manure to the land with the original agreement being cancelled. (LPRRG)

Response: This rule regulates the operation of a CFO, it does not regulate or infringe upon the contractual rights and obligations between owners or operators of a CFO and third parties.

Comment: 327 IAC 19-7-5(a)(6). Is this statement intended to address lagoon sludge management? If so, we suggest requiring a statement regarding how lagoon sludge will be managed based on the designed sludge volume for the lagoon. If this is also intended for under-floor liquid pits, then a statement would be needed to clarify how solids build up will be controlled. This statement needs significant revision to convey a clear message. (PU) (LPRRG)

Response: IDEM has deleted (a)(6) and added a provision for removal of solids in 327 IAC 19-13-1(h).

Comment: 327 IAC 19-7-5(a)(6). While not defined within the rule itself, we also suggest for improvement in allowance for design of lagoons to allow an emergency overflow as to not cut a "trough" into the side of the berm of the lagoon. (PU)

Response: IDEM has revised the rule to allow for, in certain circumstances, emergency land application when an overflow or damage to the lagoon is imminent. The emergency provisions, do not, however, allow for any overflows from a lagoon.

Comment: 327 IAC 19-7-5(c). We suggest replacing this language to specify that a soil test must be obtained that provides sufficient information about soil fertility to allow for nutrient recommendations including nitrogen, phosphorus, potassium and lime recommendations for existing or planned crops. The frequency of this testing must:

- (1) be specified in the manure management plan; and
- (2) be conducted a minimum of once every four (4) years unless a different frequency is approved by the department in writing and is included in the manure management plan." (PU)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-7-5(c). The intent of 13-18-10-2.3 is to require submission of the procedures used for soil testing rather than to mandate the submission of soil tests. As this section is drafted, it

implies that a soil test must be completed by the livestock or poultry producer for any field which may be utilized for manure application. (LPRRG)

Response: 327 IAC 19-7-5 does not require the submission of soil tests. It requires the submission of procedures used to conduct such tests, including frequency of testing. The information is to be maintained as part of the manure management plan which is required to be submitted to the department with any approval or renewal application. Soil tests are required for fields used for manure application.

Comment: 327 IAC 19-7-5(c). We question the use of the phrase “soil fertility” rather than “soil phosphorus.” Soil testing is not used to determine nitrogen levels in a field but is used to determine phosphorus levels. While we recognize that other nutrients are present in manure and that farmers will account for them, this regulatory process is not the appropriate manner in which to account for them. (LPRRG)

Response: Purdue University’s suggested language included “soil fertility” and IDEM agrees with their comment.

Comment: 327 IAC 19-7-5(e). We believe this information is better left to guidance rather than being included in the rule. (LPRRG)

Response: This provision was added to aid producers. The question of “how do you test manure” is extremely common, so IDEM is seeking to clarify that requirement in rule. If further clarification is necessary, IDEM will explore revising existing guidance.

Comment: 327 IAC 19-7-5(c)-(e). Given that the manure management plan is meant to be the plan for how one will account for nutrients in the field as well as determine what is present in the manure, we suggest that 327 IAC 19-7-5(c)-(e) be removed and made part of their own section. (LPRRG)

Response: Soil testing and manure testing are mandated by statute to be included in the manure management plan.

Comment: 327 IAC 19-7-6. IDEM should prohibit on-site burial of CAFO mortalities and should encourage the use of rendering or on-site composting as the primary disposal mechanism. This rule should also contain more details on the minimum requirements for constructing a compost facility. (KJM)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6. Eliminating burial in certain soil types is very restrictive and does not allow any flexibility for implementation of technology and management strategies. Producers with the listed soil types should have to ability to bury livestock if they can show that proper steps have been taken to preserve water quality. (PU)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6. Restrictions referring to scavenging by other animals have no relevance to water quality and should be removed from the rule. (PU) (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6. To minimize the potential for confusion, IDEM must strictly limit its intervention in this area to water quality issues. Take the provision for dead animal compost operations in the current rule at 327 IAC 16-9-3 and modify it by replacing “dead animal compost operations” in 327 IAC 16-9-3(a) with “mortality management systems.” This would put a requirement in place that any and all methods of managing mortality must have appropriate run-on and run-off control. This coupled with the Bureau of Animal Health’s (BOAH) existing regulations would resolve this issue while minimizing the regulatory overlap. (LPRRG) (SDS)(MJMcC (TMC))

Response: IDEM agrees that mortality management is best left to BOAH. Therefore, a plan is no longer required, but there remains a requirement to ensure mortalities don’t affect waters of the state.

Comment: 327 IAC 19-7-6. We assume that incineration will continue to be authorized, and that the temporary storage is available for animals to be picked up for rendering. Thus, to the extent IDEM intends to regulate incineration, those provisions should be included within this rule. (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(b)(1). It is more appropriate for the rule proposal to delineate those soil types where burial is not allowed. It would appear that the list in (c)(3) meets this purpose. IDEM should ensure that this list is complete and eliminate the provision in 6(b)(1) respecting soils which inhibit leaching. (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(c)(1). Requiring setbacks of 300 feet from potentially ponded areas greatly reduces the area for burial without providing any environmental benefit. According to BOAH regulations, animals must be buried six feet below the surface. It is not at all clear how a burial four feet below the surface could contaminate surface water. We also suggest that the setback from water wells should be from drinking water wells for human consumption. (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(c)(2). “Adjacent” should be clearly defined. Otherwise, questions will arise as to how many feet should be between a disposal site and a tile before it is considered adjacent. We suggest that the provision require burial sites be at least 10 feet from known tiles. (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(c)(3). We suggest that the sentence be modified by adding “unless a plan is developed to prevent groundwater contamination” after “SC.” (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(d)(1). “Water wells” should be limited to “drinking water wells for human consumption.” Property lines, to the extent the provision exists to provide protection for water quality, should focus on “property lines of adjoining landowners.” (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(d)(2). The provision should be revised to state that the facility should “be constructed and operated to prevent leachate from getting into ground or surface water.” (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(d)(3). This should be rewritten to state that it should be constructed and operated in a manner to control run-on and run-off to prevent contamination of surface water by process wastewater. (LPRRG)

Response: IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-7-6(d)(4). We are opposed to submit a mortality management plan to IDEM. The construction parameters such as setback and design of facilities will be part of the application. Any additional requirements for disposal are addressed by BOAH’s rules and this rule should not contain provisions which usurp BOAH’s authority to regulate dead animal disposal. (LPRRG)

Response: IDEM agrees that mortality management is best left to BOAH. Therefore, a plan is no longer required, but there remains a requirement to ensure mortalities don’t affect waters of the state.

Comment: Producers should not be required to submit names or plot plans of owners of manure land application areas, since this is not required for farmers who apply pesticides, herbicides and other petrochemicals. (TMC)

Response: IDEM disagrees and notes that the distinction is that manure is applied both as a nutrient, and as a method to manage the manure that is generated from animal agriculture, which is not the case with pesticides, herbicides or chemical fertilizers. Knowing the names and plot where manure may be applied allows IDEM to verify that each owner/operator is maintaining sufficient acreage to be able to properly manage the amount of manure generated.

Comment: Acreage requirements should be held to a minimum, and it should be easier to apply on acreage that is not in the original or amended permit. These requirements limit the number of acres where manure is applied, driving up phosphorus levels in permitted acreage. (MSD)

Response: The intent of acreage requirements is to assure that there is sufficient land to absorb the manure generated such that the manure will not be overapplied.

Rule 8. Approval Process

Comment: 327 IAC 19-8-1. “....revoked, and reissued, or revoked...” – the extra comma should be removed so that it reads as “....revoked and reissued, or revoked...” (KJM)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-8-1. We think it is more appropriate that the renewal begin on the day that the previous approval expired so that each subsequent renewal stays five years rather than some shorter duration. (LPRRG)

Response: IDEM has deleted the term “approval renewal” from this section. Historically IDEM has made the permit issued expire 5 years from the issuance date in order to assure the statute that requires permits to not be longer than 5 years was not being violated.

Comment: 327 IAC 19-8-2. This section only provides 30 days for IDEM to review the permit renewal application before the permit expires. This time frame should be at least 60 days prior to permit expiration. (KJM)

Response: In the current CFO rule, there is no requirement to submit prior to the actual expiration date and 30 days has always been sufficient in the past to process complete renewal applications.

Comment: 327 IAC 19-8-2. IDEM should have a requirement that addresses those facilities that want their permit renewed but that have a history of repetitive non-compliance and/or are currently grossly out of compliance. There should also be some language that addresses those facilities that are in bankruptcy and seriously non-compliant. (KJM)

Response: Non-compliant facilities will be dealt with on a case-by-case basis by IDEM's compliance staff. The rule provides for the revocation of a permit for non-compliant facilities which would be more appropriately used after a repeated demonstration of non-compliance instead of waiting until it is time to renew the permit.

Comment: 327 IAC 19-8-2(b). We suggest that the third sentence be revised to state, "A confined feeding operation that has been subject to an enforcement action by the department pursuant to IC 13-30-3 for a discharge within the previous five (5) years shall be subject...." Likewise, we suggest that the last sentence of the paragraph should be revised to state, "A confined feeding operation that has not been subject to an enforcement action by the department pursuant to IC 13-30-3 for a discharge within the previous five (5) years shall be considered..." (LPRRG)

Response: IDEM has deleted both of those sentences in the revised draft language.

Comment: 327 IAC 19-8-2(c). The permittee should submit a list of all spills that occurred in the five year permit period and provide a narrative of why the spills occurred, what was done on the site to remediate the spill impacts and what measures were taken to prevent the spill from occurring again. The renewal process should be used to convey to the public/department that the permittee fully understood the requirements during the past five years and has made improvements to the waste management system in a timely manner. (KJM)

Response: CFOs already notify the department of any spills and actions taken to correct the problems.

Comment: 327 IAC 19-8-2(c). We suggest that the only information which should be required to be submitted is information which has changed from the previous approval. We also oppose the requirement to maintain available acreage for the manure or litter which is not applied by the confined feeding operation but is transferred to another party. (LPRRG)

Response: Several revisions have been made to this subsection. It has been a recurring problem that CFOs do not update their farmstead plans; therefore that provision will remain.

Comment: 327 IAC 19-8-2(c)(3). This is confusing as written and should be reworded. We suggest that it state that, "Updated information if any information required by 327 IAC 19-7-1(c) has changed from the original application or a previous renewal." (LPRRG)

Response: This provision has been deleted.

Comment: 327 IAC 19-8-2(c)(4). If the farmstead plan has not changed from the original approved permit, we contend that a new one is not needed for the renewal. (PU)

Response: It has been a recurring problem that CFOs do not update their farmstead plans. Requiring it to be updated as part of the renewal will help assure that the owner/operator reviews the relevant conditions at their farm.

Comment: 327 IAC 19-8-3(a)(3). We suggest that an amendment should only be needed if the capacity were reduced by a certain percentage, such as ten percent from the most recent approval. (LPRRG)

Response: This language was changed to match 327 IAC 19-6-1(c).

Comment: 327 IAC 19-8-3(b). Further clarification is needed for what constitutes “any changes to the operation as approved.” Written reasons for why an amendment is required should be provided by the department. (LPRRG)

Response: This provision means that if there are any changes to any information included in the current approval and the application information provided to obtain the approval, the CFO must notify IDEM.

Comment: 327 IAC 19-8-4. The language in section (4)(a) is not clear; is the intent of the language to deny a permit application after failure to address at least two deficiency letters? (KJM)

Response: Yes, that is the intent.

Comment: 327 IAC 19-8-4. There must be a public notice and due process mechanism in the permit transfer rule so that adjacent landowners and concerned public can comment on the viability of the new owner/permittee to operate the facility and to insure that the good character provision is tested. (KJM)

Response: This is currently beyond the statutory authority granted to IDEM.

Comment: A person proposing ownership by transfer of a facility should be required to meet the good character rules. (JJH)(BSC)(AJH)(KP)(FD)(ECCRC)

Response: The good character requirements for CFOs derives from IC 13-18-10-1 and IC 13-18-10-1.4 and applies to any person proposing to construct a CFO or expand a CFO to increase animal capacity or manure containment capacity or both. It does not apply to a person purchasing an existing facility that does not involve construction or expansion of the facility.

Comment: 327 IAC 19-8-4(a)(1). We take this to mean that an application will be denied if the application reveals that the confined feeding operation will not be designed and/or operated in such a manner as to meet the requirements of the confined feeding rule. However, we do not believe that the rule is clear in this regard. (LPRRG)

Response: Yes, that is what is intended.

Comment: 327 IAC 19-8-4(a)(2). We suggest that the language be revised to state, “Submit a complete application after receipt of two notices **of the same deficiency** on the new or renewal application.” (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-8-5. We suggest that the language in 327 IAC 19-8-5 state “as a result of a violation that results in substantial impacts to human health or the environment.” (LPRRG)

Response: Revocation language comes directly from IC 13-18-10-2.1.

Comment: 327 IAC 19-8-6. We suggest that the opening clause in 327 IAC 19-8-6(a) be deleted and the sentence be revised to “Prior to transfer of the ownership of a CFO, the parties... (1) the anticipated date of transfer...” We propose that a new subsection (b) be created which requires that actual notice of the date of closing and assumption of responsibilities will be provided within ten days of the closing. (LPRRG)

Response: IDEM has added language indicating the request must be submitted within 90 days of the transfer. The date of transfer of responsibilities is entirely up to the parties involved in the transfer.

Comment: 327 IAC 19-8-7. Public notice should be published and appropriate signage should be displayed on the land prior to construction. Notice should also be sent to all adjacent landowners and occupants. Public comments should be allowed from anyone in the community. (HEC) (CLC) (SC) (CAC)

Response: The legislature was very specific in establishing the notice requirements under IC 13-18-10-2(b); it is beyond IDEM’s authority to require anything more.

Comment: Public hearings are important and should be continued in the rules. (JJH)(BSC)(AJH)(KP)(ECCRC)

Response: The CFO rules allow for public meetings in instances where the commissioner determines that they are warranted based on issues and concerns raised during public comment periods.

Comment: 327 IAC 19-8-7(a). We do not believe that the notice should be required to be provided to neighbors on a state form. Rather, we feel that applicants should be able to provide their own letter as notification so long as all pertinent information is included. The last sentence should be revised to state that an affidavit must be filed that certifies that the applicant will comply with the requirements. As currently written, this language requires the affidavit to be submitted before the time period expires for notice to be given to the appropriate parties. (LPRRG)

Response: IDEM is in no way stopping applicants from providing their own letter as long as they also provide notice on a state form which will ensure information, such as comment period timeframes, is consistently shared with neighbors. The affidavit language comes directly from IC 13-18-10-2(b).

Comment: 327 IAC 19-8-7(b). If the Administrative Orders and Procedures Act deems fifteen days an appropriate length of time to submit a written petition for review of an order, it is surely sufficient for collecting public comment on a CFO application. Even if IDEM deems fifteen days inadequate, forty days is still too long. (LPRRG)

Response: IDEM has changed the comment period to 33 days from the date the required notice is mailed to the neighbors by the applicant.

Rule 9. Operating Record

Comment: 327 IAC 19-9-1(b)(14). The provision in 327 IAC 19-9-1(b)(14) is not written as a record which must be kept but instead is a command for a certain action to be taken. (LPRRG)

Response: This provision has been deleted from this section and is included under the manure management plan.

Comment: 327 IAC 19-9-1(b)(14). We suggest clarifying this statement or deleting “and to minimize nutrient leaching” because fertilizer recommendations were not specifically designed to minimize nutrient leaching. (PU) (LPRRG)

Response: This provision has been deleted from this section and is included under the manure management plan.

Comment: 327 IAC 19-9-1(b)(16). This should be simplified to state, “Copies of any written waivers reducing the setback distances.” (LPRRG)

Response: IDEM believes the provision is clear as written.

Comment: Farmers should not be required to copy and submit records to IDEM. IDEM should make on site farm reviews of the records. (TMC)(MSD)

Response: Many records are required to be kept on-site for inspections. However, several of the records are required to be submitted to IDEM as part of permit applications and renewals.

Comment: Operators should be required to submit reports on manure applications to IDEM at least twice a year. They should identify their land application sites and in December report where, when and how much manure they applied. The reports should be posted to the virtual file cabinet.

(JJH)(BSC)(AJH)(ECCRC)

Response: IDEM believes the operating record kept on the farm site is the appropriate place to maintain the information discussed above. If kept on-site, it is available for inspectors to review during farm inspections to assure that such records are up-to-date and actually comport with ongoing activities at the facility.

Comment: Land application records are kept in the operating record on-site for inspection by IDEM staff. How often are these records inspected, and how would IDEM staff know if the records are falsified? (ML)

Response: Criminal violations apply to any falsification of records and as with any inspection program, records must be checked to assure accuracy and veracity. Records are inspected each time the facility is inspected. Operational issues or conflicts within records that are identified during an inspection are thoroughly investigated to determine the source of the conflict.

Rule 10. Ground Water Monitoring

Comment: 327 IAC 19-10-1. We cannot support any ground water monitoring requirements, whether as a condition of this rule or at the discretion of the commissioner, unless the conditions which will trigger the requirement are clearly delineated in this rule. We suggest that the requirement for monitoring should be related to geologic or design criteria which indicate that ground water contamination is an actual concern. (LPRRG)(T&M)(TMC)

Response: It would be impossible to list every possible site-specific condition that could trigger the need for ground water monitoring. IDEM agrees that geologic or design criteria would be the main concerns for ground water contamination.

Comment: 327 IAC 19-10-1. Use of the phrase “All CFOs required to conduct ground water monitoring must...” is unclear as to whether “All CFOs” or “CFOs with a particular site risk or spill history” are needed to conduct ground water monitoring. (PU)

Response: IDEM has added language pointing to 327 IAC 19-4-1(c). This should clarify that only CFOs with site specific concerns for ground water contamination would be required to perform monitoring.

Comment: 327 IAC 19-10-1. There is no specification as to “where” to test relative to the production and storage areas. Use of “statistical determinations” and “statistically significant increases”

are highly dependent on number of tests to determine baseline. Requiring the producer to do this is illogical. (PU)

Response: This concern would be best addressed through guidance.

Comment: 327 IAC 19-10-1. We suggest that when monitoring is required that one or two indicators be monitored, such as “field specific conductance.” With respect to the other monitoring parameters, we do not believe that there is any reason to check for phosphate levels as the likelihood of leaching to ground water is extremely minimal. (LPRRG)

Response: The monitoring parameters, other than field specific conductance and field pH, were selected based on constituents that occur in manure, and are indicative to a manure storage facility potentially leaking into the underlying ground water. Field pH and field specific conductance have been included as parameters since they are necessary to monitor while purging a monitoring well to determine ground water stability prior to sampling.

Comment: 327 IAC 19-10-1. Timing of monitoring is also inconsistent versus that for storm-water monitoring. Regarding the monitoring parameters listed, analyses for field pH and conductance will not add any particular water quality implication. Measurement of phosphate and sulfate are not direct indicators of a potential to impact human health. (PU)

Response: Timing of ground water monitoring versus storm water monitoring would be best addressed through guidance. Field pH and field specific conductance have been included as parameters since they are necessary to monitor while purging a monitoring well to determine ground water stability prior to sampling. Though phosphate and sulfate do not have maximum contaminant levels (MCLs), they are specific to the waste, and therefore have been selected as indicator monitoring parameters. Sulfate does have a secondary contaminant level of 250 mg/l.

Comment: 327 IAC 19-10-1. Without having representative background samples, subsequent sampling will be inadequate to provide any relevant information as to whether the confined feeding operation may be causing groundwater contamination. We also do not believe that it will be feasible for a farmer to determine whether or not there has been a statistically significant increase over background levels. We also believe that ground water monitoring results should be submitted just one time per year. (LPRRG)

Response: For new facilities subject to ground water monitoring requirements, representative background samples prior to population have historically been required through site specific plans developed by applicants themselves. IDEM has consistently required facilities through these plans to submit ground water results in a timely fashion after the monitoring event to ensure IDEM’s prompt notification in case of any possible contamination event. The inclusion of these requirements into rule is an effort to standardize permit conditions already currently implemented through policy. Concerns regarding the feasibility of farmers to determine statistically significant increases would be best addressed through guidance.

Comment: 327 IAC 19-10-1(b)(3)(i). List should include total dissolved solids (TDS) and total Kjeldahl nitrogen (TKN). (KJM)

Response: Total dissolved solid is too generic to be used as an indicator parameter, and may not be indicative of ground water contamination originating from a manure storage facility. The monitoring parameters list will be modified to include total Kjeldahl nitrogen (TKN), while ammonia-N and nitrate-N will be removed (see below):

(A) monitoring parameters, including:

(i) field pH;

- (ii) field specific conductance;**
- (iii) total Kjeldahal nitrogen;**
- (iv) chloride;**
- (v) fecal coliform bacteria;**
- (vi) phosphate;**
- (vii) sulfate; and**
- (viii) total organic carbon;**

(Note: According to staff chemist, total Kjeldahl nitrogen (TKN) is the sum of organic nitrogen, ammonia (NH₃), and ammonium (NH₄⁺) in the chemical analysis of soil, water, or wastewater (e.g. sewage treatment plant effluent). The parameter test itself is apparently less expensive, while also reducing the parameter list by one.)

Comment: 327 IAC 19-10-1(b)(3)(i). The proposed rule should be rewritten to require or allow the use of confirmation testing when initial positive results are obtained. (SDS)

Response: Ground water monitoring requirements are implemented on a case- by-case basis and require the submittal of a ground water monitoring plan with may include such confirmation testing requirements as part of the plan. Each plan must be approved by the department after development by the owner or operator when ground water monitoring is deemed necessary.

Comment: 327 IAC 19-10-1(b)(3)(i). Annual sampling has minimal fiscal impact. Several sampling events per year will result in a financial burden. The rule language is open ended and does not provide certainty regarding sampling frequency. (SDS)(MJMcC)

Response: The language is open ended because ground water monitoring requirements are extremely site-specific and are implemented on a case-by-case basis. Sampling frequency is a component of the written plan that must be submitted to and approved by the department.

Comment: 327 IAC 19-10-1(c). Is IDEM asking the permittee to perform non-parametric statistical analysis; and if so, how many permittees are sufficiently trained in statistics to make a judgment on a statistical increase? Assuming the permittee will hire someone to perform the statistical analysis – that person should be identified with respect to qualifications and a narrative should be provided that describes what statistical methods were used, why they were used, and the reliability of the findings. (KJM)(SDS)

Response: This concern would be best addressed through guidance.

Comment: 327 IAC 19-10-1(c). A risk assessment should be conducted prior to any corrective action being ordered. (LPRRG)

Response: (c) states the department “may” require corrective action. Appropriate assessments would come before the department takes action.

Comment: 327 IAC 19-10-1(c). The language is too open ended regarding sampling frequency, test equipment and fiscal impact. Impacts to ground water can be caused by a variety of sources unrelated to the CFO. The proposed rule does not help the CFO to positively identify the source of all statistically significant increases. Submitting water quality data as a public record will result in speculative enforcement not based on science. Water quality data should be maintained at the CFO as a private record. No change is necessary. (SDS)(MJMcC)

Response: IDEM disagrees that water quality data should be maintained as a private record. Very few instances of ground water monitoring at CFOs have been required by IDEM and each requires a

very site-specific plan that will identify an alternative source of contamination, if one exists , hence the reason the rule requires a plan to be developed based on the site.

Rule 11. Storm Water Pollution Prevention Plan

Comment: 327 IAC 19-11-2(4)(B). Most raw materials are delivered covered or in containers, so how is inclusion of access roads and rail lines protective of water quality? What is the extent of “immediate” and how it may be interpreted? Definition of the term “refuse” sites must be clarified and examples given within the guidance document. Rationale is also needed to justify why the vehicle storage areas are relevant to this rule. (PU)

Response: This language comes directly from federal storm water management rules and mirrors current IDEM storm water guidance, now being incorporated into rule for consistency.

Comment: 327 IAC 19-11-2(4)(C)(vi). The phrase “solid or fluid wastes” is used. We do not believe that this is referring to “solid wastes” as defined in IC 13-11-2-205. Nor is it clear exactly what is meant by “fluid wastes.” We anticipate that it is referring to nothing more than waste material in a liquid form. However, we urge that this provision be reworded so that there are no uncertainties about the types of products being discussed. (LPRRG)

Response: This language comes directly from federal storm water management rules and mirrors current IDEM storm water guidance, now being incorporated into rule for consistency.

Comment: 327 IAC 19-11-2(4)(C)(vi). This statement is confusing if discharge is not allowed. IDEM should remove “other than by discharge”. (PU)

Response: IDEM agrees with this comment and has revised the language.

Comment: Storm water monitoring is neither practical nor reasonably enforceable. If managed with an approved plan, monitoring should not be required, unless under specific conditions which should be stipulated by IDEM. (PU)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-1. We suggest that greater benefit would be seen by requiring that best management practices be utilized to address storm water issues rather than to require extensive storm water management plans which are expensive to create and which require extensive documentation and explanation for pollutants which are not extremely harmful and which are fully known and anticipated to be present in small quantities on the production area. (LPRRG)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-1. The types of pollutants potentially present are not those that are unduly dangerous to individuals. The impacts from storm water runoff from a livestock or poultry farm are likely to be minimal with some potentially small impacts to aquatic life. The real concern is for spill events which may discharge large quantities of pollutants that may kill fish or other aquatic life. Those events are not addressed with a SWP3. (LPRRG)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language. Large CAFOs, regardless of the CFO rule, are required to comply with 40 CFR 122.23(e) as applicable. CFOs will have to keep a storm water management certification in their operating record verifying implementation of best management practices.

Comment: 327 IAC 19-11-1(b). The use of “periodically” is vague and any requirement for review should be “annual.” (LPRRG)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-1(c)(3). This provision is vague and/or inconsistent. We suggest that a new subsection (d) be created with three categories: (1) newly constructed CFOs which must comply prior to populating, (2) existing CFOs which must comply within 180 days of the effective date of the rule, and (3) facilities in existence which become a CFO must comply within 180 days of becoming a CFO. (LPRRG)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language. At a minimum there will be three months between final adoption by the board and the effective date of this rule for existing facilities to achieve compliance with these provisions.

Comment: 327 IAC 19-11-1 and 327 IAC 19-11-2. The stormwater pollution prevention plan should include all provisions employed at land application sites to reduce and minimize contaminated stormwater runoff during storage/staging of manure and during the land application of manure/wastewater. Where does the rule address the discharge of contaminated groundwater to the surface from lagoon perimeter tiles?(KJM)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-2. The information gathered from monitoring can indicate that a problem exists, but it does not show the cause of the elevated levels of pollutants. Total suspended solids, ammonia and biological oxygen demand can all be found to be at high levels with no fault of the livestock operation. Pollutants can come from different sources and ammonia levels can be high because of air deposition. (LPRRG)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-2. The rule needs a definition for “storm water outfall” and we suggest removing TSS as it does not have a direct environmental impact (e.g. if there was more sand in the sample, this would increase TSS). We also suggest that IDEM insert wording to allow a discharge if it is able to attain certain quantifiable concentrations (e.g., a specific COD). Additionally, measurement of BOD is expensive (approximately \$30 to \$40/sample) and relatively inaccurate as it is a microbial bioassay. We suggest if monitoring is to be used, that COD is a better indicator of oxidation capacity of organic matter and a much more accurate measure. (PU)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-2. IDEM should allow for treatment systems (e.g. filtration strips) prior to release from the production area. Storm water capture structures and grading will result in substantial cost to the operation and plausibly sets the operation up for failure during significant rainfall events. IDEM is requiring either additional earthen storage facilities for storm water runoff, or placing additional burden for storm water collection and storage into existing manure storage structures. (PU)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-2(6)(B). The parameters should include Total Kjeldahl Nitrogen (TKN) and nitrate-nitrogen. The inclusion of ammonia-nitrogen (NH₄⁺) is volatile and would not represent all forms of nitrogen (e.g., silage leachate nitrogen is in the form of nitrates). (KJM)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-2(6)(B). Which BOD is being required – carbonaceous or ultimate or both? It might be prudent to include field pH as a parameter as well as total organic carbon (TOC). (KJM)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: 327 IAC 19-11-3(a)(1). As written, it currently requires an amendment whenever a change “has the potential to have a significant effect on the potential for the discharge of pollutants.” There needs to be a risk that is more concrete than the potential to increase the potential for a discharge. (LPRRG)

Response: IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

Comment: Best practices of diversions and infiltration areas are already included in the design of livestock operations and should be promoted by IDEM rather than imposing another costly plan that controls an insignificant contribution to any potential water pollution. (TMC)

Response: There is no costly plan imposed by this rule. The rule requires all CFOS to consider a list of potential storm water-related issues that may help each CFO plan for storm water issues before they arise. As livestock operations expand and change over the years, designed diversions and infiltration areas may change. Requiring an ongoing assessment and consideration of such issues is a good management practice and allows each CFO to tailor solutions to its individual operation.

Comment: Storm water management plan development is expensive and time-consuming. The average producer will have to hire a consultant to develop and maintain the plan. Most farms already have things in place to deal with storm water and runoff potential. (MSD)

Response: The rule does not require a written plan, per se, it merely requires the consideration of storm water issues and the implementation of certain storm water management practices such as preventive maintenance, self-monitoring inspections and sediment and erosion control. IDEM does not believe that considering and implementing these basic good management practices should require the hiring of a consultant.

Rule 12. Manure Handling and Storage; Site, Design, and Construction Requirements for Waste Management Systems

Comment: If new standards are required to meet the regulations set forth by the Clean Water Act, all manure storage facilities should be required to adhere to the specified leakage rates and design standards. Existing manure storage facilities should submit to testing to determine whether they are in compliance with the new design standards. If the facilities are not in compliance, they should submit a plan to upgrade and/or relocate existing manure storage structures with manure management plan. The timeline for implementation of new requirements should not exceed the existing permit. Inspection of new or upgraded facilities should be required for permit renewal. Engineers that verify construction

designs and implementation should be required to be licensed in Indiana. (HEC) (CLC) (SC) (CAC) (JJH)(BSC)(AJH)(KP)(FD)

Response: Requiring farms built decades ago to comply with current design and construction requirements is unnecessarily burdensome and would result in bankruptcy for many. The rules establish management practices to requires older farms to be managed in a way that remains protective of the waters of the state. IDEM will require modifications to the design of any structure that poses an unacceptable risk to water quality. The definition of “registered professional engineer” includes being registered in Indiana.

Comment: 327 IAC 19-12-1. In the introductory sentence, the word “must” should be “shall” to emphasize the importance of the site restrictions. (KJM)

Response: In this case, the word “must” is used correctly in that it is stating as a fact that waste management systems are not to be constructed except in accordance with the rule. This is considered using the indicative mood of the verb and such mood is the preferred method of rule writing in accordance with the legislative and administrative rules drafting manuals put together by legislative services.

Comment: 327 IAC 19-12-1. The provisions in 327 IAC 19-12-1 are acceptable requirements with the exception of (4), which prohibits construction over mines. While (b) allows for additional information to be shown to allow for construction in karst terrain, no similar provision exists for any of the other categories. We also suggest that if the commissioner is going to require additional information to allow for construction in karst terrain that the request for information should be in writing and details should be provided on why the information is needed. (LPRRG)

Response: NRCS and Ohio have the same restrictions and IDEM feels that the prohibition of construction over mines is important to ensure water quality. The information about karst is needed because it is a well established sensitive area that increases the risk of water quality violations. Producers intending to construct in karst terrain should be prepared to take extra measures to ensure protection of human health and the environment.

Comment: 327 IAC 19-12-1(a)(3). This rule language allows construction below flood level if the access doors (to the barns, presumably) are two feet above the flood level. Several CAFOs have been proposed to IDEM using this exact reconciliation (i.e., that the barn doors are above the flood level) yet completely ignoring the negative impacts to the pit wall integrity such flooded conditions would impose. During a flood, the entire soil column would be saturated and there would be a significant threat of structural integrity. Best to not allow construction of below ground manure storage in those flood zones, period. (KJM)

Response: IDEM feels that the language currently in the draft rule, specifically “structurally sound without lowering flood waters or the seasonal water table below the bottom of the waste management system” is sufficient to protect from floods.

Comment: 327 IAC 19-12-1(a)(3): Since this provision addresses flood plains and flood water the following change is proposed:

(3) in a one hundred (100) year flood plain, unless all waste management system access is at least two (2) feet above the one hundred (100) year flood plain and structurally sound without lowering **flood waters or** the seasonal water table **below the bottom of the waste management system**; (MV)

Response: IDEM agrees with this comment and has revised the language

Comment: 327 IAC 19-12-1(a)(5): The following change is proposed:

(5) in soil **types** that **are** is expected to **have a** ~~be in the~~ seasonal high water table, unless the water table is lowered to keep the water table below the bottom of the waste management system; (MV)

Response: IDEM agrees with this comment and has revised the language

Comment: 327 IAC 19-12-1(b): A review of 327 IAC 19-12-1(b) and 327 IAC 19-7-1(c)(7) and the interaction between these two provisions are confusing. To provide clearer specifications and requirements is proposed to separate the requirements for non-karst terrain areas from karst terrain areas in the rule and specifically address each individually. (MV)

Response: IDEM has changed the reference in 327 IAC 19-7-1(c)(7) to clarify the meaning.

Comment: 327 IAC 19-12-1(b)(3). The use of earthen storage should be prohibited in karst terrain. Only aboveground tank storage with secondary spill containment should be allowed in karst areas. (KJM)

Response: IDEM believes that construction may be safely allowed in karst terrain as long as the conditions listed in the draft rule are met. A blanket prohibition is unnecessarily restrictive.

Comment: 327 IAC 19-12-2. Surface water is all water present on the surface of the earth, which would seem to include ponded and diffuse flowing water from a storm. We do not know how someone could guarantee that the facility would always be 300 feet away from such surface waters. We also believe that 300 feet away from any surface water is excessive. (LPRRG)

Response: This provision is from the current 327 IAC 16 and IDEM is unaware of any instances where someone tried to enforce a 300 foot setback from a puddle. IDEM disagrees that a 300 foot setback is excessive.

Comment: 327 IAC 19-12-2. Setbacks to public water supplies should be at least one mile, not a mere 1000 feet. Setbacks to residential buildings should be a minimum of 1250 feet and should increase as the size of the CAFO increases with setbacks of quarter mile increments per every 1000 animal units. Setbacks for solid manure should also include a sliding scale that increases with number of animal units. The setback for a 1000 head feedlot should be different than that required for a 10,000 head feedlot or even a 100,000 head feedlot. (KJM)

Response: This provision is from the current 327 IAC 16 and IDEM believes that the current setbacks have been sufficient to protect the waters of the state.

Comment: 327 IAC 19-12-2. The proposed setbacks must be under the control of the permittee and not include any land that is considered off-property to the CAFO. It is insulting to the adjacent landowner to use their property to satisfy a setback to homes and water wells. It is also a takings to imply that the setback only apply to existing structures. The rule must also include setbacks to the facility water well that are as protective as for off-site water wells. (KJM)

Response: This provision is from the current 327 IAC 16 and IDEM believes that the current setbacks have been sufficient to protect the waters of the state.

Comment: 327 IAC 19-12-2(b)(1) should be revised to require a minimum setback of one thousand five hundred (1,500) feet from a public water supply well or public water supply surface intake structure; and (2) 327 IAC 19-12-2 (b)(2) should be revised to require a minimum setback of five hundred (500) feet from surface waters of the state, drainage inlets, including water and sediment control basins, sinkholes, as measured from the surficial opening or the lowest point of the feature, and off-site water wells. 327 IAC 19-12-2 should be revised to require a minimum setback of five hundred

(500) feet from the features described in 327 IAC 19-12-2 (b)(2) for manure storage facilities that contain solids. (HEC) (CLC) (SC) (CAC)

Response: This provision is from the current 327 IAC 16 and IDEM believes that the current setbacks have been sufficient to protect the waters of the state.

Comment: 327 IAC 19-12-2(b) It is proposed that 19-12-2(b) be updated as follows.

(b) Waste management systems must be located to maintain the minimum setback distances from the following features that are known and identifiable at the time ~~an~~ **of application is submitted for approval:**

(1) One thousand (1,000) feet from a public water supply well or public water supply surface intake structure.

(2) Except for subsection (c), three hundred (300) feet from:

(A) surface waters of the state;

(B) drainage inlets, including water and sediment control basins;

(C) sinkholes, as measured from the surficial opening or the lowest point of the feature; and

~~(D) off-site water wells.~~

~~(3) Four hundred (400) feet from existing off-site residential and public buildings.~~

(3)(4) One hundred (100) feet from:

(A) on-site **and off-site** water wells;

(B) property lines; and

(C) public roads. (MV)

Response: This language has been moved to 327 IAC 19-12-3 and some amendments conforming to the suggestion have been made. However, the 400 setback from off-site residential and public buildings remains in the rule.

Comment: 327 IAC 19-12-2(b)(3). The decision to create a setback from off-site residential and public buildings is a decision appropriately addressed through zoning. It is not within IDEM's purview to include such a requirement when there is no connection to water quality concerns. (LPRRG)

Response: IDEM believes it is prudent to maintain the setback for several reasons, including providing the operator with enough space and time to appropriately respond to a release of manure to ensure it does not reach a residential or public building. As with all setbacks, the distance may be reduced if the owner/operator can demonstrate to the satisfaction of the commissioner that a different compliance approach would achieve the same goals as the rule language.

Comment: 327 IAC 19-12-2(c). The following change is proposed:

(c) A manure storage facility **used to store solid manure** ~~that contains solids~~ must be **located to** maintained to have a minimum setback of one hundred (100) feet from the features in ~~subdivision~~ **subsection (b)(2) of this section.** (MV)

Response: IDEM believes that the language currently in the draft rule better captures the intent to regulate storage facilities that contain solids.

Comment: 327 IAC 19-12-2(d): Based on my interpretation, the following is proposed in place of 327 IAC 19-12-2(d) in the draft rule:

(d) If a feature identified in subsection (b)(2) of this section is constructed or changed to be located within the required setback distances to an existing waste management system, a new waste management system may be constructed to maintain the same setback between the existing waste management system and the feature, providing that:

(1) the feature was not under the control of the owner/operator of the confined feeding operation; and
(2) the feature was constructed or changed after the application for approval for the existing waste management system was submitted to the department. (MV)

Response: IDEM agrees with this comment and has revised some of the language in the draft rule.

Comment: 327 IAC 19-12-3. We suggest that this subsection clarify that those operations do not have to increase their storage capacity to 180 days unless they expand their operation by constructing new buildings or manure storage structures. (LPRRG)

Response: IDEM agrees with this comment and has added an applicability section to Rule 12.

Comment: 327 IAC 19-12-4(f). The requirement to provide fourteen days notice is difficult in many circumstances and seems excessive for some of the simple construction tasks which take place – flexibility is needed. (LPRRG)

Response: IDEM agrees with this comment and has changed the notice to 2 days.

Comment: 327 IAC 19-12-3(a). The prescriptive list is unnecessary and potentially too restrictive for some situations while being too inclusive for others. We suggest that (a) be revised to require that the storage capacity include all manure and other waste liquids which will be diverted to the structure. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(a): definitions that clearly describe waste from cooling systems, water tank wastes, net average rainfall, and normal runoff are needed to be able to correctly implement the rule. (MV)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(a). Net average rainfall must include snowmelt specifically. (KJM)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(a)(7). Definition is needed here for “normal run-off”. (PU)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(a). Facilities with manure storage structures built under previous permits should be allowed to maintain their structures with the storage capacity as originally permitted. The working should be changed to read: “All **new** manure storage facilities...”. (SDS)

Response: Facilities with existing waste management structures are able to maintain those structures as originally permitted. If a feature is constructed after the original waste management system was submitted to the department, the setback distances would be based on the original approval. Language at 327 IAC 19-12-2(d) has been amended to clarify this.

Comment: 327 IAC 19-12-3(a)(8). This would seem to be more appropriately combined with (b)(2) to discuss the twenty-four hour, twenty-five year storm events as part of one provision since the two subsections seem to overlap. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(c). Should this be “precipitation” rather than “run-off”? We refer to our previous comments that release of storm water from the production facility should be allowed after proper treatment (e.g. filtration strips), thus not placing additional burden and setting the facility up for plausible failure of existing manure storage facilities. (PU)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(c). It is proposed that the recording of the available freeboard and documentation in the operating record be deleted from this provision and included in the requirements outlined for the operating record. The following changes are proposed to 327 IAC 19-12-3(c):

(c) For any uncovered manure storage facilities, the design must include a minimum of two (2) feet of freeboard, measured from the lowest point of the top of the manure storage facility, to include the expected precipitation from a twenty-five (25) year, twenty-four (24) hour precipitation event that falls directly on the **surface area of the manure storage facility.** ~~draining into the structure.~~ Manure storage facilities must have clearly identified markers to indicate the required freeboard, ~~and that the required freeboard must be maintained. , recorded, and kept in the operating record.~~ (MV)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(d). the following changes are proposed:

(d) Manure storage facilities **that are earthen or utilize an earthen base** may not be constructed in sand or gravel soils; (Unified Soil Classification: ~~of Pt~~, GW, GP, GM, GC, SW, SP, SM, SC), unless specially designed with an approved liner, in accordance with section 5 of this rule. (MV) (LPRRG)

Response: This requirement is from the original 327 IAC 16. IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(e), 327 IAC 19-12-5(b). The proposed rule does not allow use of a concrete liner for waste storage structures. Concrete liners should be allowed in the rule. (SDS)

Response: Indiana NRCS Conservation Practice Standard Code 313, incorporated into the rules at 327 IAC 19-12-4 allows for the use of concrete liners.

Comment: IDEM should regulate all manure storage for manure generated by CAFOs and CFOs. (ECCRC)

Response: IDEM regulates all manure storage for manure generated by CFOs on the site of the CFO, including staging of manure of sites used for land application of the manure. The CFO rules do not, however, regulate the use of all manure within the state. Manure spread on crop farms, for example, must be applied in accordance with requirements set forth by the Office of State Chemist, which has

responsibility for regulating the application of herbicides, pesticides and chemical and non-chemical fertilizers within the state. IDEM's regulatory authority for this rule is limited to water quality issues related to the construction and operation of the actual CFO within the state as that term is defined at IC 13-11-2-40.

Comment: 327 IAC 19-12-3(e)(2). The following edit is proposed to better state the intent of this provision:

(e) The base of a manure storage facility must be above bedrock as follows:

(1) If not in karst terrain, the base must be at least two (2) feet above bedrock.

(2) If in karst terrain, the base must be at least five (5) feet above bedrock, unless additional **separation** distance is determined **to be required** by the commissioner based on information provided under section 1(b) of this rule. (MV)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(e)(4). In previous conversations and public meetings, IDEM has indicated that the agency would clarify any standard within the rule itself, rather than provide direct reference to a separate agency's document as is done here for the construction specifications. (PU) (MV)

Response: : IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

15 USC §272, Utilization of Consensus Technical Standards by Federal Agencies, states that: "All Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments."

The only exception to this is if the standards are impractical or conflict with applicable laws, neither of which are the case with this rulemaking. Therefore, if IDEM were to elect not to use industry standards, we would have to lay out extensive reasons as to why that decision was made

In addition, IC 13-18-10-4(b) requires that standards are consistent with publications from animal industry specialists, postsecondary educational institution specialists, or governmental bodies. By referencing IN NRCS, Midwest Plan Service, and Purdue University guidance IDEM is making sure that design and construction requirements are scientifically based and universally accepted.

Comment: 327 IAC 19-12-3(f). This provision of the draft rule is prescriptive, limited in its scope, and makes direct reference to date certain design manuals and specifications limiting the ability to include realistic design parameters and construction techniques during the duration of the rule. It is recommended that 327 IAC 19-12-3(f) be deleted and 327 IAC 19-12-3 be reorganized. (MV) (LPRRG)

Response: : IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language. 15 USC §272, Utilization of Consensus Technical Standards by Federal Agencies, states that: "All Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments."

The only exception to this is if the standards are impractical or conflict with applicable laws, neither of which are the case with this rulemaking. Therefore, if IDEM were to elect not to use industry standards, we would have to lay out extensive reasons as to why that decision was made.

In addition, IC 13-18-10-4(b) requires that standards are consistent with publications from animal industry specialists, postsecondary educational institution specialists, or governmental bodies. By referencing IN NRCS, Midwest Plan Service, and Purdue University guidance IDEM is making sure that design and construction requirements are scientifically based and universally accepted.

The design standards listed in the draft rule are applicable only to new construction, meaning they are not retroactive. Hence, there will be no effect on existing structures; only future construction. Additionally, if the farm can provide a design that is equally protective of the environment, the department will review and consider it for approval.

Comment: 327 IAC 19-12-3(f). The minimum separation distance should be 30 feet for non-karst bedrock and prohibition of belowground storage of waste in karst terrain. (KJM)

Response: Construction of waste management systems in karst terrain is prohibited unless the commissioner determines, based on site-specific information and soil boring data, that the design and construction specifications are sufficiently protective of the sensitive karst area. The commissioner may require additional measures to protect waters of the state under this rule should the individual situation merit it.

Comment: 327 IAC 19-12-3(f). It would seem reasonable to expect that if a professional engineer's certification is required for all concrete manure storage facilities then it will not be necessary for IDEM to review the design and construction specifications as part of the approval process, therefore expediting the review process. **An Indiana licensed professional engineer on the project should be required to certify that CFO and CAFO facilities and manure containment structures are built according to designs approved by IDEM.** (MV) (LPRRG) (ECCRC)(ML)

Response: The rule has been modified to require the signature of a professional engineer registered in the State of Indiana upon completion of any manure storage structure. That certification is to be kept with the operating record.

Comment: 327 IAC 19-12-3(f). 327 IAC 19-12-3(f)(3) requires a minimum soil bearing capacity for all manure storage facilities of 2,000 pounds per square foot. Remembering that a manure storage facility includes any pad, pit, pond, lagoon, tank, building, or manure containment area it is not appropriate to establish design standards that are not practicable or applicable. This prescriptive approach to design is not sound, adds unnecessary costs, and limits and/or prohibits realistic designs in areas that do not meet these minimum requirements. (MV) (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(g). The rule must address the corrosion resistance of the concrete used to build manure structures. This is a problem that can be resolved simply by insisting on a better grade of concrete, generally one that includes Type V cement. The structures should not be made with cinderblock. There must be a mechanism to inspect the surface integrity of the concrete during operation to insure that the expected low permeability of the concrete is maintained throughout the operation of the manure storage facility. (KJM)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction. Specifically, the design requirements contained in Mid West Plan Service # 36, Concrete Manure Storage Handbook, discusses the possibility of acid attack on concrete in the manure storage structure.

Comment: 327 IAC 19-12-3(g). This overlaps the requirements in 327 IAC 19-12-3(a), specifically 327 IAC 19-12-3(a)(6) and appears to be specific to liquid manure storage facilities. If this provision is specific to liquid manure storage facilities then it needs to be clearly stated. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-3(h). Include a requirement that the commissioner must provide a written explanation when requiring testing of the manure storage facility. (LPRRG)

Response: IDEM has revised the rule to require the requested written explanation, see 327 IAC 19-4-1(c).

Comment: 327 IAC 19-12-4(a). We suggest this be revised to clarify that if the only discharge is of non-contact cooling water, an NPDES permit should only cover the non-contact cooling water and the manure management aspects of the production area should continue to be regulated under the CFO program. (LPRRG)

Response: IDEM is not going to require multiple permits within a facility when one permit will provide the necessary environmental protection. If a facility is discharging non-contact cooling water and the facility does not have a NPDES CAFO permit, depending on the size of the facility, IDEM would either designate the facility a CAFO or it would become one automatically by virtue of its size and discharge. The NPDES CAFO permit would then be required for the entire facility.

Comment: 327 IAC 19-12-4(b). There can be many sources of ammonium-N in water, elevated levels should not automatically trigger a determination that a manure storage structure is leaking. Finally, the 50 feet requirement is not appropriate in all situations. Sampling points should be established on a case by case basis. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-4(c). We feel these parameters are overly restrictive. As written, they seem to even prohibit tying into an existing drainage tile. In (c)(3), the requirement for a back up pump is unnecessary so long as the operator has access to a separate pump that can be utilized in the event of failure of the primary pump. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-4(c)(4). The restriction that an outlet must be either twenty or fifty feet from a property line may be excessive if the water can be safely placed into a ditch or creek which is within the setback and will carry the water away. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

Comment: 327 IAC 19-12-4 and 327 IAC 19-12-5. We believe that these are largely overly restrictive, do not provide needed flexibility, and will provide no additional benefit to human health and the environment. We are opposed to the broadly applied and overly burdensome and costly

requirement of having a professional engineer prepare a construction quality assurance plan for all manure storage facilities. This provision if maintained must be limited to only those manure storage facilities that require a liner and should only be addressed in 327 IAC 19-12-5 and should be deleted from 327 IAC 19-12-4. Additionally, we suggest that if a quality assurance plan prepared by a professional engineer is submitted that it result in an expedited review of an application. (LPRRG)

Response: IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language. Additionally, the rule does not require a construction quality assurance plan and has been amended to require a registered professional engineer to certify to construction upon completion of any manure storage structure. The certification is to be kept in the operating record.

Comment: 327 IAC 19-12-5. Most of the design criteria for liners are in line with what the NRCS recommends in the animal waste management field handbook (AWMFH). In Appendix 10D of the AWMFH (<http://www.wsi.nrcs.usda.gov/products/w2q/awm/docs/handbk/awmfh-chap10-app10d.pdf>) (PU)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards.

Comment: 327 IAC 19-12-5. The stipulation of specific technologies (i.e. geo-textile liners) severely limit the capacity for future implementation of technologies which may have similar capacity are limited. For this reason, we suggest not targeting a specific technology, but rather the performance standard. (PU)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards.

Comment: 327 IAC 19-12-5. Performance criteria should only be required when there is a need based on site risk. In addition, standard, economical, and accurate testing methodology for any performance criteria need to be available, but should not exclude new technological measures for failure and/or contamination. (PU)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards.

Comment: 327 IAC 19-12-5(a). It is agreed, as has been the standard, that manure storage facilities that require a liner be developed by or under the supervision of a professional engineer and the design be certified by a professional engineer. (LPRRG)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Additionally, the construction of any manure storage structure must be certified upon completion by a registered professional engineer.

Comment: 327 IAC 19-12-5(b). The proposed rule does not provide adequate protection because it allows the use of erodible clay soil as the only liner in certain conditions. A double liner and ground water monitoring should be required for all facilities. The clay soil liner should be protected from erosion by a synthetic liner. (MJMcC)

Response: : IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Please refer to the newly amended language.

Comment: 327 IAC 19-12-5(b) and (c). It is proposed that 327 IAC 19-12-5(b) and (c) as currently stated in the draft rule be deleted and replaced to state:

(b) Liners used in manure storage facilities must meet the following design standards:

(1) have a seepage rate that does not exceed one-thirty-second ($1/32$) cubic inch per square inch area per day.

(2) liners constructed of earthen materials shall be at least eighteen (18) inches thick.

(3) geomembrane liners, such as a high density polyethylene (HDPE) or polyvinyl chloride (PVC), shall be at least forty (40) mil (1.0 mm thick)

(4) geomembrane liners require a gas release system to prevent gas build-up beneath the liner.

(MV)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Please refer to the newly amended language.

Comment: 327 IAC 19-12-5(b). We believe that the allowable seepage rate should be 1/32 cubic inch per square inch per day (approximately 1×10^{-6} cm/sec). (LPRRG)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Additionally, the seepage rate has been amended to 1/16 cubic inch per square inch per day.

Comment: 327 IAC 19-12-5(b). The requirements of 5(b)(1) through (6) are very specific and there is no sound technical basis for requiring an escalating design standard based on the in-situ soils. This suggests that expensive and intensive site investigations will be required to determine and demonstrate compliance with these standards. Other provisions of this rule conflict with the expectations presented in 327 IAC 19-12-5(b). Additionally, the escalating design standards included in 19-12-5(b) unnecessarily increase costs for no documentable benefit. (LPRRG)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Additionally, soil tests are not mandatory if a liner is used.

Comment: 327 IAC 19-12-5(b)(1). How will this lower seepage rate be determined during the operation of the facility? The permit language will have to have some sort of seepage measurement and/or calculation that uses actual data, not laboratory data. (KJM)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards for liners. The rule currently requires at least three (3) feet of in situ soils that meet the maximum seepage rate, as determined by soil test. Less than that requires the use of a liner.

Comment: 327 IAC 19-12-5(b)(2)(B). PVC should not be allowed as a liner material due to its inability to withstand UV degradation. (KJM)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. PVC is allowed under the listed NRCS standard but it requires that those who use it follow manufacturers' instructions on protecting the liner material from degradation from weather and exposure.

Comment: 327 IAC 19-12-5(b)(4). The requirement must include compaction at optimum moisture content to insure that the clay materials are installed correctly and that the compaction reflects the laboratory measurement. (KJM)

Response: IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Compaction rates are contained in the design and construction standards for earthen lagoons, referred to in the rule.

Comment: 327 IAC 19-12-6(b). Rule should include a requirement for cathodic protection for steel tanks. (KJM)

Response: The installation of underground steel storage tanks for manure is prohibited and steel tanks may only be installed above ground. Additionally, 327 IAC 19-12-4(k) and 327 IAC 19-13-1(f) have requirements regarding the strength and monitoring of steel tanks to ensure structural integrity, thus negating a requirement for cathodic protection.

Comment: 327 IAC 19-12-6(b)(3). We suggest that this provision be rewritten to generally require that tanks be cleaned so that hazardous substances are removed prior to addition of manure to the tank. (LPRRG)

Response: This provision matches the current 327 IAC 16-8-9(b)(4) and IDEM is unaware of any instances of noncompliance with the requirement.

Comment: 327 IAC 19-12-6(c). It is proposed that the following be added to 327 IAC 19-12-6(c) as 327 IAC 19-12-6(c)(10):

(10) except for soils within these soil classifications that according to USDA NRCS Soil Survey data or on-site investigation have a soil permeability of 2.0 inches per hour or less. (MV)

Response: The rule has been amended to require that vegetative management systems must be constructed according to the NRCS standard for Vegetated Treatment Area.

Comment: Vegetative management systems constructed in soils other than those listed as prohibited are unlikely to provide treatment or infiltration into the soil. Heavy soils are typically not conducive to growing and maintaining the necessary plants. The proposed rule should be rewritten to allow the use of proven vegetative management systems in sandy soils. (MJMcC)

Response: The rule has been amended to require that vegetative management systems must be constructed according to the NRCS standard for Vegetated Treatment Area.

Rule 13. Manure Handling and Storage; Operational Requirements

Comment: 327 IAC 19-13-1(c). Removal exclusively for land application is too narrowly drafted. Manure may also be removed for staging as well as other beneficial uses, such as for energy production in a digester or gasifier or pelletizing and selling. Also, manure may be transported from the site of production to another structure for storage. We suggest that to clarify any confusion which may exist with respect to transport that the provision state "Manure must be stored in an approved manure storage facility...." (LPRRG)

Response: This provision matches the current 327 IAC 16-19-1(c), but IDEM has revised the language in the draft rule. The land application requirements listed in 327 IAC 19-14, and referenced in this provision allow for both staging and marketing. Additionally, for operations utilizing a digester, gasifier, or pelletizing unit at the operation, those structures are required to have an approval and would thus already satisfy the provision.

Comment: 327 IAC 19-13-1(h). The tile discharge should be analyzed for TKN and total phosphorus during discharge. The parameters tested should include total dissolved solids (TDS), total phosphorus, and fecal coliform in an attempt to distinguish field tile drainage from manure application versus other fertilizer sources. The data should be submitted to IDEM in a monitoring report. (KJM)

Response: This provision has been deleted from the draft rule.

Comment: 327 IAC 19-13-1(h). Because ammonia is a gas (NH₃), samples would generally come out 0. Capping or visibly monitoring known tile outlets could be suggested as best management practices in the guidance but this does not belong in the rule. (PU) (MV) (LPRRG)

Response: This provision has been deleted from the draft rule.

Comment: 327 IAC 19-13-1(h). Although we think this provision should be eliminated altogether, if IDEM chooses to retain it, clarification is needed limiting this provision to production areas and not land application areas. (LPRRG)

Response: This provision has been deleted from the draft rule.

Comment: 327 IAC 19-13-2. This rule should require the other registrations to be acquired before or during the permit review process. The rule directs the applicant to solid waste program only – would there also be an air quality component to some systems? (KJM)

Response: This is a Title 327 rule, and thus it can only address water quality issues. There are currently no applicable air quality registrations to reference.

Comment: 327 IAC 19-13-2. We oppose any requirement that digesters and other energy recovery systems must register with the solid waste program. (LPRRG)

Response: Currently the solid waste management program has the authority to regulate digesters and other energy recovery systems. The solid waste rules are going to be revised to establish a procedure for registration of digesters and other energy recovery systems that may use a wide variety of materials as feedstock. The rules will be structured to minimize the administrative requirements of obtaining an approval. Repeating the same set of requirements in a CFO rule for systems utilizing manure is inefficient and makes the development of inconsistencies between the CFO and Solid Waste Rules more likely.

Comment: 327 IAC 19-13-3. The sentence in 327 IAC 19-13-3 is confusing. We think this confusion could be rectified by removing the phrase “used to move manure” from the middle of the sentence. (LPRRG)

Response: This provision has been updated to match original rule language from 327 IAC 16.

Comment: 327 IAC 19-13-3. Clarification of “public thoroughfares” may be warranted. What are “authorized premises”? (PU)

Response: Such common terms retain their common meanings, “Public thoroughfares” means any thoroughfare open to the public. “Authorized premise” means any location to which the manure transporter has been allowed access.

Comment: 327 IAC 19-13-3. The sentence needs to be reworded so that it does not imply that dumping/leakage is allowed from vehicles that are moving manure to authorized locations. This may be the appropriate place to require the registration of any manure/wastewaters that enter Indiana for disposal that are not associated with a CAFO/CFO in Indiana. (KJM)

Response: IDEM agrees and has revised the language in the draft rule. The Office of the State Chemist is the agency with specific statutory authority to regulate manure from out-of-state being applied to Indiana land.

Comment: 327 IAC 19-13-4. We suggest that land application of the spill material collected should be an option here at agronomic rates similar to the statement at the end of 327 IAC 19-14-6 (e). (PU) (LPRRG)

Response: IDEM agrees with this comment and has revised the language in the draft rule.

Comment: 327 IAC 19-13-4. Item (a)(1)(C) states “returning spilled manure or waste liquids to an approved waste management system” does not address the problem when that system was the source of the spill (i.e., a failure of the containment system) or if it has no capacity to receive returned spilled waste volume and still maintain freeboard. (KJM)

Response: IDEM believes that in an emergency situation maintaining required freeboard is not as important as ensuring the spilled manure is cleaned up and returned to an appropriate storage facility. Additionally, IDEM has revised the rule to include an emergency provision for situations where a spill may be imminent.

Comment: 327 IAC 19-13-4(a)(1)(C). We believe that this section should include clarification on the amount of manure or other related liquids which must be spilled before notice must be given. (LPRRG)

Response: Any further clarification on spilled materials may be found in the spill rule at 327 IAC 2-6.1.

Comment: 327 IAC 19-13-4(a)(4). There should be delineation between that equipment/materials used to address chemical spills versus that equipment used to address manure/wastewater spills. (KJM)

Response: This rule is concerned with manure spills. 327 IAC 2-6.1 regulates all spills that could be a threat to water quality.

Rule 14. Land Application of Manure

Comment: First we would suggest a change in the terminology used in this section. CFO operators now base land application of manure on manure nitrogen content, not soil nitrogen content. (LPRRG)

Response: IDEM believes the terminology used is correct.

Comment: IDEM’s response to comments in the first comment period concerning reporting and certification of land application events was inadequate. The policy and objectives for public participation in Clean Water Act programs should be applied to the CFO rule as well as the CAFO NPDES rule. See 40 CFR §§ 25.3 and 25.4. The public cannot meaningfully participate in the development and modification of manure management plans and nutrient management plans without information on land applications by specific facilities. Nor can the public meaningfully fulfill their rights and obligations under the Clean Water Act’s citizen suit provision or contribute information about program and permit violations (see 40 CFR § 123.26(b)(3) and (4)) without such information. (HEC) (CLC) (SC) (CAC)

Response: IDEM’s CFO program is operated under the authority granted under IC 13-18-10. The CAFO NPDES rule does incorporate federal requirements regarding MMPs and NMPs. IDEM believes the system in place for the CFO program provides a balance of protection of Indiana’s environment, citizens’ right to know, and owners and operators ability to operate in an efficient and environmentally sound manner. Had the legislature wanted smaller farms than those required to obtain a NPDES CAFO permit under federal law to meet the same federal requirements, the CFO statutes at IC 13-18-10 would have reflected that mandate. Currently they do not.

Comment: The CFO rule should have a reports and reporting section, similar to the rule for the land application of biosolid, industrial waste product, and pollutant-bearing water at 327 IAC 6.1; specifically section 6.1-4-18(a) and section 6.1-7-12(a). Moreover, these records and notifications are available to the public. (HEC) (CLC) (SC) (CAC)

Response: IDEM does not believe such a requirement is necessary given the soil and manure testing requirements and land application limitations contained within the CFO rule. Also, CFOs are subject to regular on-site inspections performed by IDEM compliance personnel.

Comment: The public should be able to be informed about the land application of manure. The first report, submitted by January 31, should describe the locations, with maps, of each site where manure will be applied during the coming year. If the operator adds a new site during the year, he or she must report that location to IDEM before manure is applied. By December 31, the operator should report where, when, and how much manure was applied on each of these sites. (HEC) (CLC) (SC) (CAC)

Response: IDEM does not believe such a requirement would provide information beyond what current testing requirements provide. Additionally, such a requirement would be very burdensome on the operator and would be very difficult to practically enforce. The draft rule record keeping requirements regarding land application practices mirror existing requirements found in the original 327 IAC 16.

Comment: IDEM should adopt the ASABE/NRCS excretion values (which several of the faculty writing this letter were instrumental in assembling) for the Guidance Document for this rule. These values are located at: <http://policy.nrcs.usda.gov/OpenNonWebContent.aspx?content=17768.wba> (PU)

Response: IDEM agrees with this comment and has added the reference.

Comment: We propose that when using N-based application rates, no application may exceed the crop N fertilizer recommendations after accounting for N losses due to application timing and method or four (4) times the expected crop P removal, whichever results in lower application rate. Limiting applications to some fixed value of maximum N loss due to application method or timing would be another possible approach. (PU)

Response: IDEM has adopted the ASABE/NRCS N application rates.

Comment: 327 IAC 19-14-1. This is also a good place to reinforce the need for registration for land application of manure/wastewater that is imported into Indiana. (KJM)

Response: This is not the appropriate place to regulate out-of- state manure. The Office of the State Chemist is the proper regulatory body to deal with this issue and has specific statutory authority to do so. That office is currently working on regulations that will include requirements similar to the suggestion.

Comment: 327 IAC 19-14-1. The following is proposed:

Sec. 1. Land application of manure, litter, or process wastewater to land that is:

(1) owned by the permittee;

(2) rented **and land application decisions are controlled** by the permittee; or

(3) utilized by the permittee under an agreement for land use **and land application decisions are controlled by the permittee**

shall be done in accordance with the requirements of this rule. (MV)

Response: IDEM believes that the current draft language better expresses the responsible party for land application.

Comment: 327 IAC 19-14-2(a)(2). This is confusing and unclear. (PU) (MV) (KJM) (LPRRG)

Response: IDEM agrees and has revised the language in the draft rule.

Comment: 327 IAC 19-14-2(c)(4). Provisions for marketing and distribution of manure are found in 327 IAC 19-14-7, not in 327 IAC 19-13-5 as indicated in (c)(4). (LPRRG) (MV)

Response: IDEM has corrected the reference.

Comment: 327 IAC 19-14-2(b). It is not necessary to have a land use agreement for all acreage utilized for the application of manure. It is more important to document the application of the manure in accordance with the rule than to document a potentially short-term agreement for land used to utilize the manure. It is proposed that 327 IAC 19-14-2(b) be deleted and 327 IAC 19-14-2 be reorganized. (MV)

Response: This provision comes directly from the original 327 IAC 16 and IDEM is not aware of any compliance or enforcement issues that have arisen because of it.

Comment: 327 IAC 19-14-2(c). Should include all calculations used to justify the lesser acreage using the alternative methods and/or innovative technology. It should also address whether or not the land application occurs in phosphorus limited watersheds and how that would impact the use of lesser acreage and still be protective of waters of the state. (KJM)

Response: IDEM believes that “to the satisfaction of the commissioner” would include calculations. Should the commissioner require additional information to grant such a request, he may ask for any information necessary to approve methods alternative to those spelled out in the rule.

Comment: 327 IAC 19-14-2(d). This provision appears to be incomplete as written leading to confusion in an accurate interpretation. In the reorganization of this section this would be 327 IAC 19-14-2(c). The following changes are proposed:

(d) Copies of any written waivers **documenting** related to a reduction of the **manure application setback to** property lines ~~setback distances~~ must be kept in the operating record. (MV)

Response: IDEM believes the current language is sufficiently clear as written.

Comment: 327 IAC 19-14-3. With comments rendered for the first notice of the CFO rule, there was concern expressed for an animal operation filing an appeal for a violation. The IDEM response did not adequately address this particular comment. (PU) (LPRRG)

Response: The concern expressed was in relation to an operator disagreeing with an inspector's findings during an inspection, not filing an appeal. The administrative appeals process is always available when the agency makes a determination affecting the rights of a person. That process is the formal appeals process. However, complaints as to IDEM employees' performance should be reported to that person's immediate supervisor as soon as possible. State law requires that an inspector provide an oral report of his or her findings that may lead to a notice of violation at the time of the inspection and follow that up with a written summary within 45 days of the inspection. Should the owner not be available at the time of the inspection, the inspector is required to mail the summary by certified mail within 45 calendar days of the inspection. These requirements are found at IC 13-14-5.

Comment: 327 IAC 19-14-3. This part of the rule does not address the use of computer programs and whether or not various programs will be accepted by IDEM as documentation and how that software is explained by the applicant (i.e., data inputs, assumptions, limitations of the output, reliability of the software). (KJM)

Response: IDEM is aware that there are many computer programs that can assist producers in many ways. However, mandating use of a particular program is not appropriate in this rule. It is an issue better dealt with in guidance.

Comment: 327 IAC 19-14-3. We suggest that manure applications made in the summer and fall prior to a crop being planted be allowed to have an increased rate of nitrogen application which would be consistent with the rates applied from other sources of nitrogen which could be applied in the fall. (LPRRG)

Response: IDEM has included allowances for nitrogen loss during land application. The rule currently references the Purdue University Cooperative Extension Service publication ID-101: Animal Manure as a Plant Nutrient Resource, February 2001. That document discusses how to estimate nitrogen loss.

Comment: The application of manure, nitrogen and micronutrients are critical to crops and soil maintenance. The farmer accepting the manure and the livestock operator should determine what is appropriate for the land. An across-the-board rule on nitrogen loss is contrary to extensive university research and could be inappropriate for the soil type receiving the manure application. (TMC)(EL)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: Most facilities are not designed to hold twelve months of manure, and applying that much manure during spring and summer results in over-application and applying during wet weather. A better solution would be to allow for reasonable nitrogen loss for proper application. (MSD)

Response: : IDEM has included allowances for nitrogen loss during land application. The rule currently references the Purdue University Cooperative Extension Service publication ID-101: Animal Manure as a Plant Nutrient Resource, February 2001. That document discusses how to estimate nitrogen loss.

Comment: Manure application should be allowed based on nitrogen requirements for upcoming crop plant needs, and allow more than one year of phosphorus to be placed on the field during one application. Not allowing phosphorus to be applied on soils high in phosphorus will increase the number of acres needed for manure application and have a detrimental effect on grain producers that need the phosphorus and other nutrients in the manure. (MSD)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: 327 IAC 19-14-3. Soil tests should not represent more than 20-30 acres for best management and should probably not represent more 40 acres in this rule. (PU)

Response: IDEM agrees with this comment and has revised the draft rule language.

Comment: 327 IAC 19-14-3(e). The list of information required for the operating record should include the following: "(9) Content of pathogens, including *E. coli*, *Listeria*, *Salmonella*, and a treatment plan in the event that pathogens are found in manure." (HEC) (CLC) (SC) (CAC)

Response: IDEM does not intend to include the requirement that operators test for pathogens. Current limitations on land application activities incorporate Best Management Practices to minimize the risk of pathogen transport to waters of the state. There are currently no pathogen-related standards within the federal regulations for animal feeding operations. IDEM believes current land application restrictions tied to soil types and topography are the most practical way to protect the waters of the state.

Comment: 327 IAC 19-14-3(e)(7) and (8). The statements in (7) and (8) must be revised to read “available manure nitrogen and total manure phosphorus”. As written, it implies that IDEM wants to include sources other than manure, which goes beyond the mandate of this rule. (PU) (LPRRG)

Response: IDEM agrees with this comment and has made some revisions to the draft language.

Comment: 327 IAC 19-14-3(e)(7) and (8). In 2008, IDEM personnel stated that any producer who applied manure based on potentially available manure N (no losses due to application method or timing) that also applied commercial fertilizer N would be cited for an over-application of N unless they had used the PSNT to document the need for more N. This leaves producers in an untenable position. The most generous assumption that we are willing to allow is that 200,000 acres of corn (equivalent to 3 percent of the IN corn crop) use the PSNT soil test, so most producers could plausibly falsify their records because IDEM’s current approach to estimating manure N availability is not based on science in any conceivable way. (PU)

Response: IDEM agrees with this comment and has made revisions to the draft language.

Comment: 327 IAC 19-14-3. Why allow an additional three years of land application based on nitrogen when the phosphorus levels exceed 200 ppm? How will IDEM protect phosphorus limited watersheds if the soils are sandy and thereby do not retain phosphorus (i.e., the soil P would be low)? (KJM)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: 327 IAC 19-14-3(a). This section of the rule should be revised to say as follows: “The owner/operator of a confined feeding operation shall have a soil test and a manure test conducted in accordance with the manure management plan submitted to meet the requirement in the current 327 IAC 16-7-2(b)(6).” (HEC) (CLC) (SC) (CAC)

Response: As 327 IAC 16 is being repealed, the section to which you are referring is the manure management plan within the application requirements previously found at 327 IAC 16-7-2. The new reference to 327 IAC 19-7-1 in the rule is the correct reference in that it refers to the manure management plan as required as part of the application for approval.

Comment: 327 IAC 19-14-3(a). The requirements for soil borings and seasonal water table information at 327 IAC 19-7-1(c)(7) are incorrectly referenced in this provision of the rule. It is believed that the correct reference is 327 IAC 19-7-1(c)(5). (MV)

Response: IDEM has corrected the reference.

Comment: 327 IAC 19-14-3(b). For this provision, the following changes are proposed:

(b) The agronomic rate **of application of nitrogen** ~~for potentially available nitrogen~~ must not exceed the nitrogen (N) requirements of current or planned crops of the upcoming growing season as documented in the operating record. (MV)

Response: IDEM believes that the term “potentially available nitrogen” is more accurate.

Comment: 327 IAC 19-14-3(c). We suggest editing this to read, “... soil test P values that are less than 51 ppm (or less than or equal to 50 ppm) and 51 to 100 ppm”. (PU)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: 327 IAC 19-14-3(c). This should reference “crops” as it is entirely appropriate and necessary to apply manure based upon the phosphorus need of crops for the next several years. (LPRRG) (PU)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: 327 IAC 19-14-3(c). Use of the phrase “eliminate P applications” must be removed as it has no place in the rule. A manure application made at an N rate equal to 3x the crop P removal rate would result in manure applications being made only every three years. It is not economically feasible, nor easily achievable for manure to be applied on a single year’s P removal rate basis, especially with injected liquid manures. (PU)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: 327 IAC 19-14-3(c). It is proposed that 327 IAC 19-14-3(c) be deleted and replaced with the table below:

Soil test level (ppm)	YEAR			
	1-2	3-5	6-10	10+
0-50	N based	N based	N based	N based
51-100	1.5 x P crop removal	1.5 x P crop removal	1.5 x P crop removal	1.5 x P crop removal
101-200	1.0 x P crop removal	1.0 x P crop removal	1.0 x P crop removal	1.0 x P crop removal
201-250	0.9 x P crop removal	0.75 x P crop removal	0.75 x P crop removal	0.75 x P crop removal with SCPP demonstrating soil loss below allowable T
251-275	0.9 x P crop removal	0.75 x P crop removal	0.5 x P crop removal	0.5 x P crop removal with SCPP demonstrating soil loss below allowable T
276-300	0.9 x P crop removal	0.75 x P crop removal	0.25 x P crop removal	0.25 x P crop removal with SCPP demonstrating soil loss below allowable T
301-350	0.7 x P crop removal	0.5 x P crop removal	0	0
351-400	0.7 x P crop removal	0.25 x P crop removal	0	0
400+	0	0	0	0

(MV) (LPRRG)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: Phosphorus land application restrictions represent a large burden on the Indiana economy without providing a clear water quality benefit. Restriction of phosphorus is best

accomplished through development and regulation of TMDLs within the NPDES process , and is not well suited to regulation of land application practices at non-point sources. Non-point sources may be able to enter into voluntary nutrient trading agreements in the future, which will incentivize the implementation of best management practices beyond what can reasonable be written into the regulation. (SDS)(T&M)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: Soil test phosphorus is not an indication of leaching potential or total phosphorus in the soil, but only an indication of how much phosphorus is available for plant use. Using soil test phosphorus as proposed in the draft rule requires speculation beyond the range of crop response and is unproven and scientifically indefensible. These factors should be used within a risk based assessment which considers the need for managing phosphorus in surface runoff with best management practices that increase nutrient trapping and reduce total runoff. (SDS)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: Threshold limits proposed in 327 IAC 19-14-3 are not based on a purely scientific rationale for reducing phosphorus transport potential, and they include ethical considerations regarding how much excess phosphorus a producer may store within a land base. Limiting phosphorus application because phosphorus is a limited resource is not appropriate for regulation. This section of the rule should be redrafted to address manure conveyance by runoff and soil erosion only, and to allow for site specific review of risks through a phosphorus risk assessment. (SDS)(MJMcC)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: The phase-in period in the rule is not realistic. Producers will need more time to implement these changes, especially when IDEM is proposing to do nothing for the first three years of the proposed six year phase-in period. (EL)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: Anyone spreading CFO or CAFO-generated manure should follow a manure management plan with phosphorus as a limiting factor and should follow all CFO and CAFO manure application regulations. (ECCRC)

Response: IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

Comment: 327 IAC 19-14-4(a). We oppose the reduction of time for staging without covering the material from 72 hours to 24 hours. (LPRRG)

Response: IDEM agrees with this comment and has revised the language in the draft rule.

Comment: CFO or CAFO-generated manure should not be stockpiled for more than 96 hours outside a regulated manure holding structure. (ECCRC)

Response: Manure that is staged at a land application site for more than 72 hours must be covered or bermed to prevent run-on or runoff and can only be staged in accordance with the rule requirements.

Comment: 327 IAC 19-14-4(a)(4). We cannot support this provision with respect to setbacks from residential buildings. There is no indication that this provision has anything to do with water quality concerns and is outside of the purview of IDEM. (LPRRG)

Response: IDEM has adopted the Indiana NRCS land application setbacks.

Comment: 327 IAC 19-14-4(b)(1). We believe that this requirement is unduly restrictive. Additionally, we do not believe the restriction should apply to privately owned farm ponds. Also, with respect to wells, the restriction should be limited to drinking water wells for human consumption. (LPRRG)

Response: This provision comes directly from the original 327 IAC 16 and IDEM is unaware of any problems it has caused to date.

Comment: 327 IAC 19-14-4(b)(3). A landowner should be able to stage manure for a limited period of time in a flood plain if conditions such as weather forecasts, river levels, and recent rainfall for both the application location and upstream watersheds are considered. (LPRRG)

Response: This provision comes directly from the original 327 IAC 16 and IDEM believes that staging in a flood plain is an unnecessary risk to water quality. As evidenced by recent late-winter flooding in Indiana, weather conditions can change quickly and dramatically providing the operator no opportunity to move the staged material or provide flood protection.

Comment: 327 IAC 19-14-4(c). It may take more than one day to clean out a large building, and leaving the material outside over night does not create an environmental risk. Inclement weather, which is included in the provision, is a legitimate concern to which this restriction should be limited. (LPRRG)

Response: This requirement has been standard in CFO approvals issued since February 2002 and IDEM is unaware of any problems it has caused to date. The inclusion of this provision allows producers needed flexibility to the requirements within 327 IAC 19-13-1(c) which, like the current rules at 327 IAC 16, currently allows no such practice.

Comment: 327 IAC 19-14-4(d). The restriction on staging manure to the amount which can be applied in a particular field is inconsistent with normal management activities. (LPRRG)

Response: This provision has been deleted from the draft rule.

Comment: 327 IAC 19-14-4(e). Application to frozen and snow covered ground should be allowed with the creation of a winter-time manure application plan. It would also be beneficial to include provisions for emergency applications in certain circumstances; this should also apply to manure application on saturated ground. (LPRRG)

Response: IDEM has revised the prohibition of land application to frozen and snow covered ground.

Comment: On a limited basis, we have successfully applied manure to frozen ground in accordance with a soil conservation practice plan in an environmentally sound manner. Not being able to continue this practice on a limited basis will cause a significant financial impact. (T&M)

Response: IDEM believes proper planning will in most cases alleviate the need to apply to snow-covered or frozen ground. However, IDEM is aware that issues and emergencies can arise and has built a contingency into the rule to allow for such application on an emergency basis.

Comment: IC 13-18-10-4(2)(B) provides that uniform standards for manure application are appropriate for a specific site. Prohibiting application of manure to frozen or snow covered ground without exception prevents application of site-specific best management practices, and provides none

of the flexibility contemplated by IC 13-15-2-2(a)(6). Manure application to frozen or snow covered ground should be allowed if conducted under a management plan that includes a field based suitability and risk assessment. (T&M)(MJMcC)

Response: IDEM believes proper planning will in most cases alleviate the need to apply to snow-covered or frozen ground. However, IDEM is aware that issues and emergencies can arise and has built a contingency into the rule to allow for such application on an emergency basis.

Comment: We agree with the prohibition on applying waste or manure to saturated, frozen or snow covered ground. (JJH)(BSC)(AJH)

Response: IDEM concurs, except in very limited, emergency situations.

Comment: Manure application on acreage with a phosphorus level greater than 200 ppm should be prohibited. (JJH)(BSC)(AJH)(ECCRC)

Response: The rule as currently drafted does not allow for land application on acreage with p levels above 200 ppm for large CAFOs and CFOS approved for construction after the effective date of the new rules. Existing smaller facilities will have a time-frame set forth in the rule to come into compliance with this requirement.

Comment: Manure from a CFO or CAFO should not be applied to frozen ground or less than 24 hours prior to a forecasted major rain event. (ECCRC)

Response: IDEM agrees.

Comment: 327 IAC 19-14-4(e). We suggest rephrasing to read “No surface applications to land with > 2% slope or to bare/tilled ground” to account for provisions where injected manure applications below the frost line could be accomplished. (PU)

Response: IDEM agrees with this comment and has revised the language in the draft rule.

Comment: 327 IAC 19-14-4(g). This provision takes away any discretion which exists in how to handle a particular situation. This provision also does not take into account that a particular segment of water may already be in violation of the water quality standards or be so close to violation that it would be unfair to single a livestock or poultry operation out for an enforcement action. (LPRRG)

Response: IDEM has revised the language of this section.

Comment: 327 IAC 19-14-4(g). This statement substantially ignores the federal agricultural storm water exemption. If a producer has developed and follows (with appropriate records) a nutrient management plan, water quality violations that result should automatically receive the federal agricultural storm water exemption. Thus we contend that this statement should be significantly revised or removed. (PU) (LPRRG)

Response: IDEM agrees with this comment and has revised the language in the draft rule.

Comment: 327 IAC 19-14-5(a). A farmer should not be subject to a violation for using spray irrigation if minor ponding occurs in limited areas or some time passes before the manure is absorbed into the soil. We also suggest that application of manure and process wastewater by spray irrigation could be allowed at reduced rates when there is less than 20 inches of soil above the bedrock. (LPRRG)

Response: If an operator can demonstrate to the satisfaction of the commissioner that spray irrigation can be conducted in an environmentally protective manner through the use of an alternate design or innovative technology, the commissioner may approve the activity in accordance with 327 IAC 19-5-1. So long as spray irrigation activities are conducted to prevent excessive application, occasional

ponding and slow infiltration should not rise to the level of a violation. Should the ponding be widespread and the ground saturation prevent soil uptake of the spray irrigation, it would be prudent for the operator to discontinue the irrigation until the soil has absorbed the applied liquids.

Comment: 327 IAC 19-14-5(a). Limiting one-time application rates to some fraction of an acre-inch (13,500 gallons/acre would be 0.5 acre-inches and 7000 gallons/acre would be 0.25 acre-inches) would be a much more effective and practical approach to addressing this water quality concern. Perhaps IDEM could use language similar to that found in 327 IAC 19-14-6 (d), or change this to state the implied intent of not allowing for excessive ponding or runoff. (PU)

Response: The intent is not implied. The rules states that spray irrigation activities must be conducted to prevent equipment leaks and excessive application. Excessive application is indicated by ponding and a rate that exceeds the infiltration rate of the soil. Limiting one-time application rates to some fraction of an acre-inch could not be practically enforced by IDEM inspectors.

Comment: 327 IAC 19-14-5(d). County soil survey books are no longer the official source of NRCS soils information. Those data reside in the NRCS soil data mart. Additionally, the term “drainage basin” needs to be defined, as one could interpret this as the entire Mississippi River drainage basin (as an example). (PU)

Response: IDEM agrees with the comment and has revised the language in the draft rule.

Comment: 327 IAC 19-14-5(d)(2) and (3). While we would like clarification on what exactly is meant by “drainage basin,” the considerations in (d)(3) provide adequate protection and the restriction in (d)(2) is unnecessary. (LPRRG)

Response: IDEM believes that the restrictions on spray irrigation are necessary and must be used in concert to provide adequate protection from run-off. These restrictions mirror the management practices contained within the current NPDES CAFO rule and relieves CFOs, as currently required, from seeking a site-specific plan approval. These same practices have been incorporated into all spray irrigation plans for CFOs which have been approved by IDEM, and the inclusion of these requirements is an effort to standardize management practices already currently implemented through policy.

Comment: There should be stronger rules on drag lines including the site and length of time they are allowed to be under roads and in drainage ditches, creeks and culverts. (BSC)

Response: The requirements for spray irrigation deal mainly with assuring that liquid is not over-applied onto fields. The regulation on the use of drag lines specifically has not been addressed in this rule. There is, however, an over-arching expectation that all equipment will be managed and maintained in a matter that does not cause discharges. This is one of the reasons equipment inspections are required.

Comment: 327 IAC 19-14-6. It is proposed that injection and single-pass incorporation be added back to the setback table allowing for efficient land use and management associated with the application of manure and wastewater using injection application methods. (MV) (LPRRG)

Response: IDEM agrees with this comment and has inserted the NRCS setbacks into the draft language.

Comment: 327 IAC 19-14-6. We question why setback distances were changed from the previous table. We recommend keeping the current CFO setback table or adopting the NRCS setback requirements. (LPRRG)

Response: IDEM agrees with this comment and has inserted the NRCS setbacks into the draft language.

Comment: 327 IAC 19-14-6. Why would the setback to a public water supply be less when the manure is land applied than when it is held in storage? The setbacks do not consider aquifer recharge areas for public and private water supply. Why is the setback the same for land that is less than and greater than 6 percent? The greater slope of the land is indicative of erosion and proximity to surface drainage leading up to waters of the state. Why would the setback to public water supply be 500 feet regardless of slope but double if near waters of the state? There needs to be setbacks to residential homes and businesses of at least 500 feet, if not more depending on whether or not the setback must use the adjacent landowner's property. (KJM)

Response: IDEM has inserted the NRCS setbacks for land application into the draft language. IDEM feels that the listed setbacks are sufficient to protect the waters of the state.

Comment: 327 IAC 19-14-6(a). "Surface Waters of the State" is not defined (whereas surface water is). We ask for clarification of terminology. IDEM should clearly define whether application setbacks apply to private ponds (both the CFO operator's pond and neighboring landowner's ponds). Our suggestion would be to make a distinction between ponds with outlets (i.e. ponds with levees) and ponds that do not have outlets. Additionally, we suggest that setbacks should be defined for any pond not under control of the operation. (PU) (LPRRG)

Response: The reference to surface waters of the state was used to provide clarity that setback distances are determined in reference to surface waters rather than groundwater. The statutory definition of waters of the state includes ground water. IDEM felt it was important to make that distinction. It is not relevant to the protection of water quality to determine who has control or ownership of a body of water. For purposes of manure application, the important consideration is making sure that no manure fouls these waters through incorrect application or inadvertent run-off. The terminology is the same as has existed since the inception of CFO regulations at 327 IAC 16. To date, no confusion has arisen based on how the setbacks have been defined in current regulations.

Comment: 327 IAC 19-14-6(a)(3). How will a 35 feet filter strip provide the same protections as a 200 feet setback to waters of the state? Does this sentence imply that land application could occur 35 feet from a drainage inlet if there is a filter strip? (KJM)

Response: IDEM has changed the draft language to make the filter strip 50 feet to match NRCS standards.

Comment: The regulation should differentiate between injection and incorporation relative to adjacent property lines, roads and waters. The proposed rule should include setback distances for injection as currently listed in 327 IAC 16-10-4. The proposed setbacks erode private property rights and provide no incentive for liquid injection to improve efficiency. (T&M)(MJMcC)(EL)

Response: Setback distances have been amended to incorporate Indiana NRCS practice standards for Manure Application.

Comment: Setbacks as zoning requirements have been a local government responsibility. IDEM should keep the current setback standards and allow the local community to determine its own requirements. (TMC)

Response: IDEM's responsibility is to protect Indiana's environment, and specifically with these rules, the waters of the state. Setbacks within the rules are designed to protect Indiana's waters and allow adequate time and space for owners and operators to conduct cleanups should there be a release

of manure. IC 36-1-3-8 provides that a unit of local government does not have the power to regulate conduct that is regulated by a state agency, except as expressly granted in state statute. The rules do not supplant local zoning requirements to the extent these requirements are not regulating conduct regulated by IDEM.

Comment: Setbacks are not sufficient from property lines, public roads, homes, schools and hospitals. (JJH)(BSC)(AJH)(KP)(FD)

Response: IDEM believes the setbacks are sufficient.

Comment: 327 IAC 19-14-6(a)(4). What height of barrier would be allowed? Whose land would be flooded from this effort? It seems as if the only reason to allow gradient barriers is to further reduce the minimal setbacks to an absurdly tiny setback of 10 feet. (KJM)

Response: If a gradient barrier prevents run-off and protects wells, sinkholes, and surface waters, it is adequate.

Comment: 327 IAC 19-14-6(b) and (c). These requirements are found in 327 IAC 19-14-4. While they are consistent, they should be included in one place to minimize the size of the rule. (LPRRG)(SDS)

Response: IDEM believes the requirements found at 327 IAC 19-14-6 are more specific in terms of requiring, for example, visual inspection of surface water conveyance channels on fields where land application activities take place. The requirements of 327 IAC 19-4-4 are more general in nature. The requirements are not duplicative.

Comment: 327 IAC 19-14-6(e). Our contention is that monitoring should not be required for land application areas if producers are following a nutrient management plan and thus should be able to receive the federal storm water discharge exemption. (PU)

Response: The CFO rule does not require a nutrient management plan as is required under the federal CAFO NPDES rules. IDEM believes monitoring for run-off or discharge from a field tile is the most effective way to assure no water quality violations and also to correct any problems as they are happening. Given the large number of field tiles found in Indiana fields, IDEM believes it is a good management practice and an excellent preventive measure to protect Indiana's waters.

Comment: 327 IAC 19-14-6(e). We propose that (e) should read: "Land application sites must be inspected to locate any **reasonably identifiable** field tile outlets..." (LPRRG)

Response: IDEM does not see the value in this language addition given the vague nature of the term. Field tiles are, except in areas of breakage and subsequent cave-in, underground. Thus, one view would be that they are never "reasonably identifiable" given the fact that they are supposed to be buried. However, given the proliferation of field tiles in Indiana farm fields, it is also reasonable to assume that most fields with decent drainage, particularly those in clay-dominated soils, have field tiles. Thus, the suggested term is so vague as to not add value to the rule.

Comment: 327 IAC 19-14-6(e). This is a wonderful requirement but there is no indication of how it will be enforced. The provision needs a reporting requirement that includes the personnel that did the inspection, a map of each field showing the location of the field tiles and the point of monitoring, among other activities. The report should be submitted annually to IDEM. (KJM)

Response: The point of this requirement is to identify any land application problems as they occur and stop any potential discharges from fouling waters of the state. IDEM does not see the added value in providing an annual report submittal requirement.

Comment: 327 IAC 19-14-7(d). The draft rule is inconsistent with 355 IAC 7-3-3 which applies only to fertilizer material (manure) distributed to produce an agricultural crop. The proposed rule should acknowledge that other uses of manure exist besides producing an agricultural crop. Manure distributed for non-crop production should be exempted from this section. (SDS)

Response: IDEM will continue to work with the OSC to assure consistency among the state rules. As this rule is a water quality rule, dealing primarily with the land application of manure and practice standards that will keep the manure from waters of the state, it speaks primarily to those uses consistent with that purpose. A complete waiver from the need for acreage is contemplated in the draft rule and 327 IAC 19-5-1 allows for the use of a design or compliance approach other than a requirement specified within the rules so long as the innovative technology is approved by the commissioner.

Comment: 327 IAC 19-14-7(e). We feel that the restrictive nature of the waiver of the land application acreage unduly penalizes operations with a history of marketing more than 75% of their manure (in some cases up to 100%). Any operation that exports some manure should only be required to have the land base needed to manage the manure that is not exported. (PU) (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Comment: 327 IAC 19-14-7(e). An operation should not have to wait two years before being able to offset the available acreage requirement by marketing manure. (PU) (LPRRG)

Response: IDEM believes it is vital to have a proven track record of a farm's ability to market manure. Therefore, in light of the change made to allow a waiver for 100% of manure, the requirement in the draft rule is now 3 years, or a written contract for the marketing of manure for the entire approval term.

Comment: 327 IAC 19-14-7(e). The timing of this rule as well as guidance and educational programs for poultry and livestock producers must be in concert with implementation of the "nutrient application certification" program from the Office of the IN State Chemist. (PU)

Response: IDEM agrees with this comment and will work with the Office of the State Chemist.

Rule 15. Decommissioning of Manure Storage Facilities

Comment: 327 IAC 19-15-1. We are uncertain about the meaning of "when the environmental threat has been removed". We suggest that 327 IAC 19-15-1 be eliminated and that 327 IAC 19-15-2 controls the decommissioning of a manure storage structure. (LPRRG)

Response: This phrase mirrors the original 327 IAC 16 and means that the manure storage facility is deemed decommissioned when there is no longer a threat to the environment. IDEM feels this is an important part of ensuring the protection of human health and the environment.

Comment: 327 IAC 19-15-2. We urge IDEM to recognize that allowances should be made for alternative approved closure plans on a case by case basis that consider future plans for the manure storage structure. (LPRRG) (MV)

Response: The alternative compliance section in 327 IAC 19-5 applies to all aspects of this article. It is unnecessary to repeat it. IDEM believes that the current standards are protective of waters of the state while not being too restrictive.

Comment: 327 IAC 19-15-2(c). We urge that this be amended to include written reasons from the commissioner when requiring additional decommissioning activities. (LPRRG)

Response: IDEM agrees with this comment and has revised the language.

Rule 16. Exiting the Confined Feeding Approval Program

Comment: 327 IAC 19-16-2(b). In these requirements, no actual standards are given – the criteria they must meet should be clear. We also suggest that a provision be included that clearly indicates the level of environmental compliance needed to exit the program. As an example, a history of no discharges within the previous five years should be sufficient to qualify an operation for exiting the program so long as the other conditions are met. (LPRRG)

Response: IDEM agrees that along with the commissioner’s approval of the information submitted in (b), a history of no discharges for 5 years would be sufficient to exit the program. However, it would be impossible to list every possible instance in which IDEM would approve a request to leave the program. In this case, basic considerations are better suited to the rule rather than a set of prescriptive requirements.

Comment: 327 IAC 19-16-3(b). This provision does not include the considerations made previously in the rule with respect to decommissioning a facility. Specifically, they do not allow for removal to the extent practicable. A determination of “how clean is clean” for a particular site should be based on the site specific conditions required for the planned future use of the property while also ensuring protection of water quality. (LPRRG)

Response: 327 IAC 19-16-3(a) references the decommissioning standards in 327 IAC 19-15.